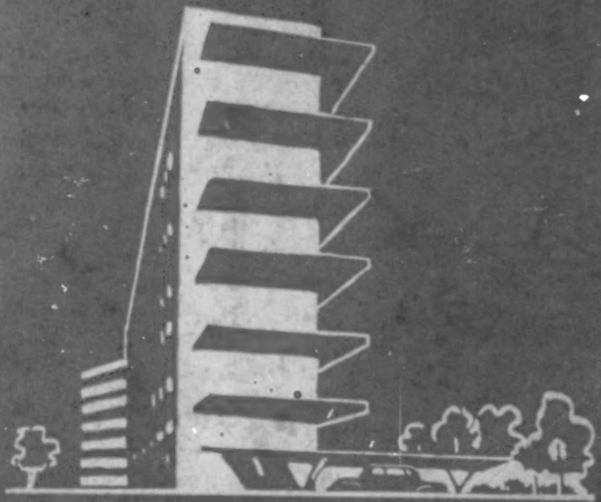
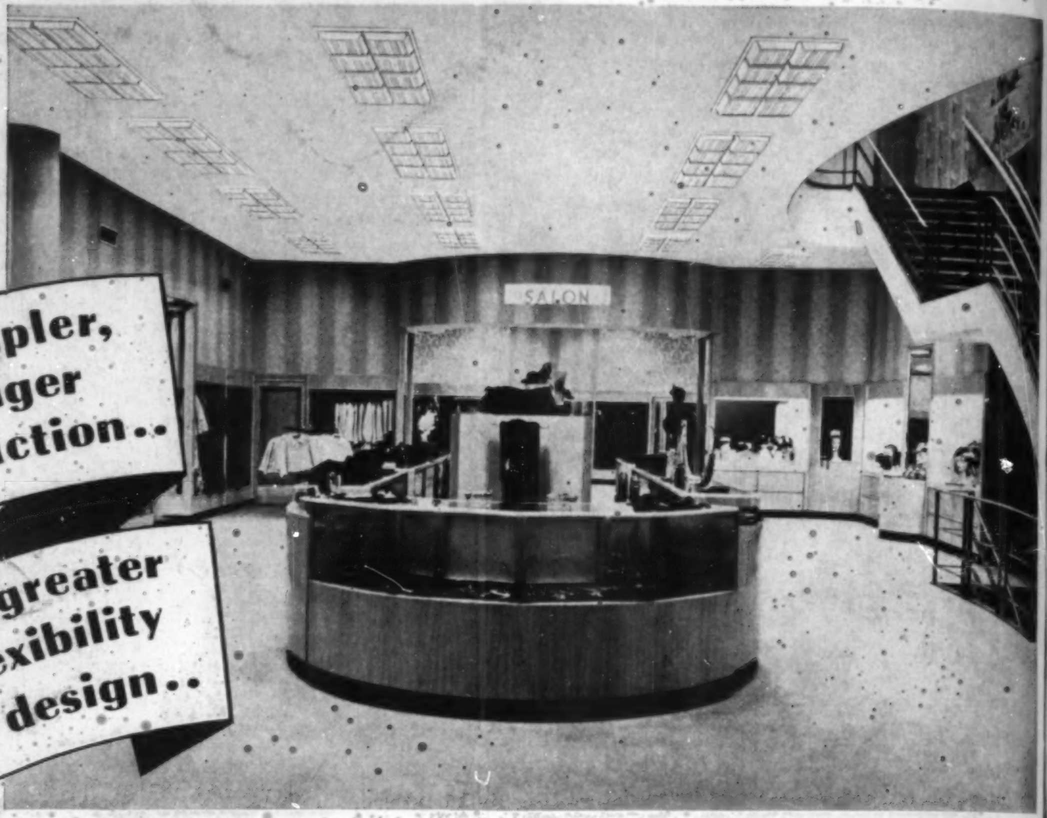
ARCHITECTURAL RECORD



OCTOBER 1944

APARTMENTS • LAUNDRIES



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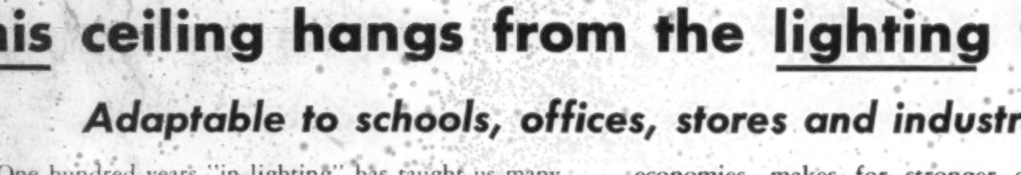

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ARCHITECTURAL RECORD

COMBINED WITH AMERICAN ARCHITECT AND ARCHITECTURE

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The adjoining letter tells the same story that we get from architects, building owners, building superintendents and plumbing contractors everywhere—the story of excellent service, low maintenance cost and ease of adjustment.

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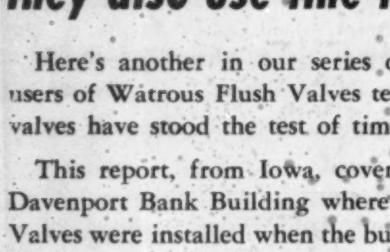
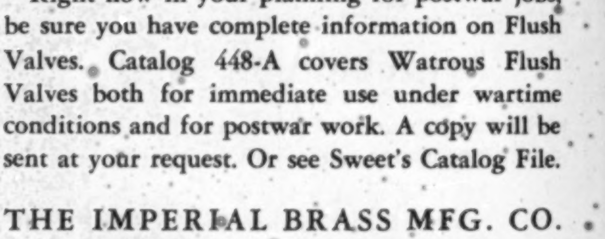


Davenport Bank Building, Davenport, Ia.
Architect: Weary and Alfred, Chicago, Ill.
Plumbing Contractor: Ideal Heating and Construction Co., Davenport, Ia.



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August 13, 1944

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Wm T Edens

DAVENPORT BANK BUILDING
Building Superintendent

Watrous Flush Valves

THE RECORD REPORTS

Building "Free-for-All" • Supply of Fixtures in Question • Arguments of Builders to WPB • Price Controls • Bottleneck Danger • Lumber and Labor • Congress and Building

On the average, the zeal in official Washington to reconvert seems to diminish in proportion to the distance from the White House. Statements on the subject by Byrnes or by the President himself have a sweep of bold intention that has not yet been frustrated by petty detail.

So the push to get rid of controls, goaded perhaps by the approaching election, comes powerfully from the top.

Building "Free-for-All"

In the building field, as in others, WPB officials were less than certain that L-41 could simply be torn up on the day of victory in Europe. But, after all the wrangling, and after all the proposals for retaining this or that residue of control, the decision seems to be to give it up almost entirely.

But there will still be three qualifications—(1) which, in its practical effect, may prove important indeed—is that the armed services retain their priority over building materials, particularly lumber. But once their needs have been satisfied, it probably is to be almost a free-for-all. (2) Projects of over $1,000,000 will probably still remain under WPB control. (3) Suppliers will be subject to price ceilings.

There has been much discussion. Although builders, suppliers and others participating argued continually for it, there are segments of the industry which prefer to see particular controls retained. Similarly, some WPB chiefs are worried about the effects of complete relaxation of controls.

Those within WPB who opposed the simple elimination of building control fell into two groups. First among them were those who were unsure that the industry was ready to go ahead on its own. Although some builders' materials are in fairly abundant supply and others in supply sufficient to meet the slight drafts of war housing, it seemed questionable to them that supplies generally would meet unrestricted building. Moreover, such supplies as do exist are not to be gotten by a mere telephone call to a jobber or a warehouse; buyers must search and, when they find something, must cajole, argue and threaten to get delivery.

Supply of Fixtures in Question

This WPB group feared that the construction industry would rush ahead, contracting to put up everything that seemed remotely possible to build, speculating on the likelihood—a certainty in ordinary times—that, when they were ready to install them, they would find bathtubs, pipes, toilets and electrical fixtures. But, suppose all sorts of bottlenecks appeared and these components were not found. Would the suburbs of the cities fill up with half-built houses? Would there be uninhabitable apartments because of slip-ups in arranging for sewage? To make matters worse, would the possibility of hitches inspire everyone to buy and hoard every bit of building materials around, perhaps setting off a price boom that would throw builders' cost calculations out of balance?

Another group, within WPB and industry, opposed immediate V-E Day elimination on other grounds. The hotel and apartment house owners have been waiting a long time for repair and remodeling materials. They do not want to have to compete for them with builders, and some, no doubt, would prefer as long as possible to put off having to compete with the new structures as well. So their proposal was to release the earliest materials and to put present buildings in good shape. The argument, as expressed among WPB officials, was that such a program would provide good housing more swiftly than new construction which would be subject to delays; that, faced with old but re-equipped structures, builders would speculate less wildly on new ones and that such a plan would be less likely to set off a boom in supplies.

Arguments of Builders to WPB

Meeting with WPB officials, the major group representing the builders offered these counter-arguments. First, the period of shortages will be brief. Unevenly, indeed, but still swiftly the stocks of materials will accumulate. Consequently, sudden bottlenecks would not prove serious. Second, to attempt to control civilian construction would mean setting up criteria of one kind or another, any of which, when proposed, would probably be demonstrably unworkable. Moreover, the enforcement would be hard.

To the many questions asked by worried WPB men, builders' representatives have a definite answer although they expressed it differently. Some merely said, with some asperity,

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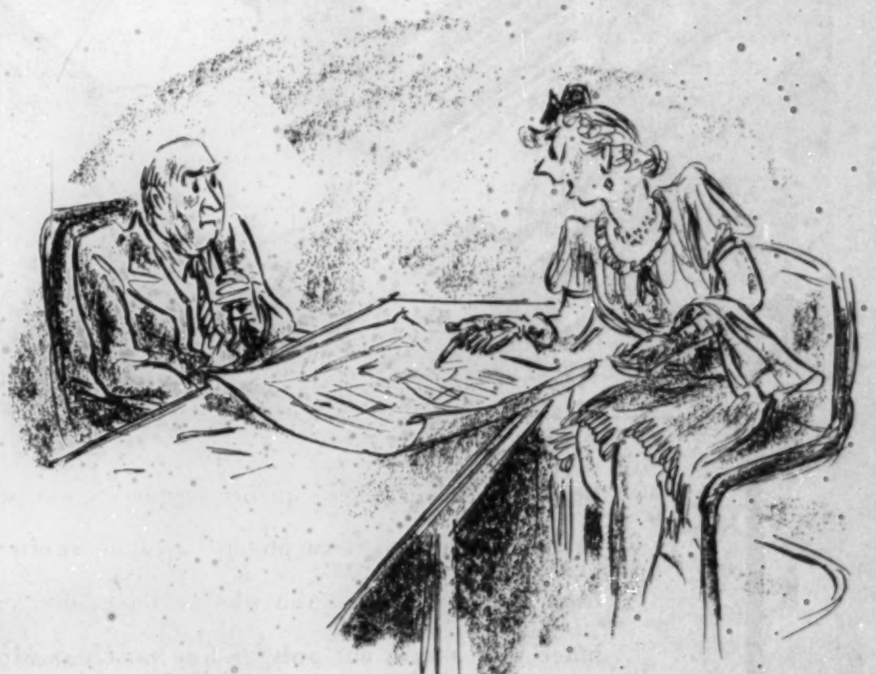

"Exactly! Where you want mutative continuity and design correlation, I want a closet!"

—Drawn for the RECORD by Alan Dunn

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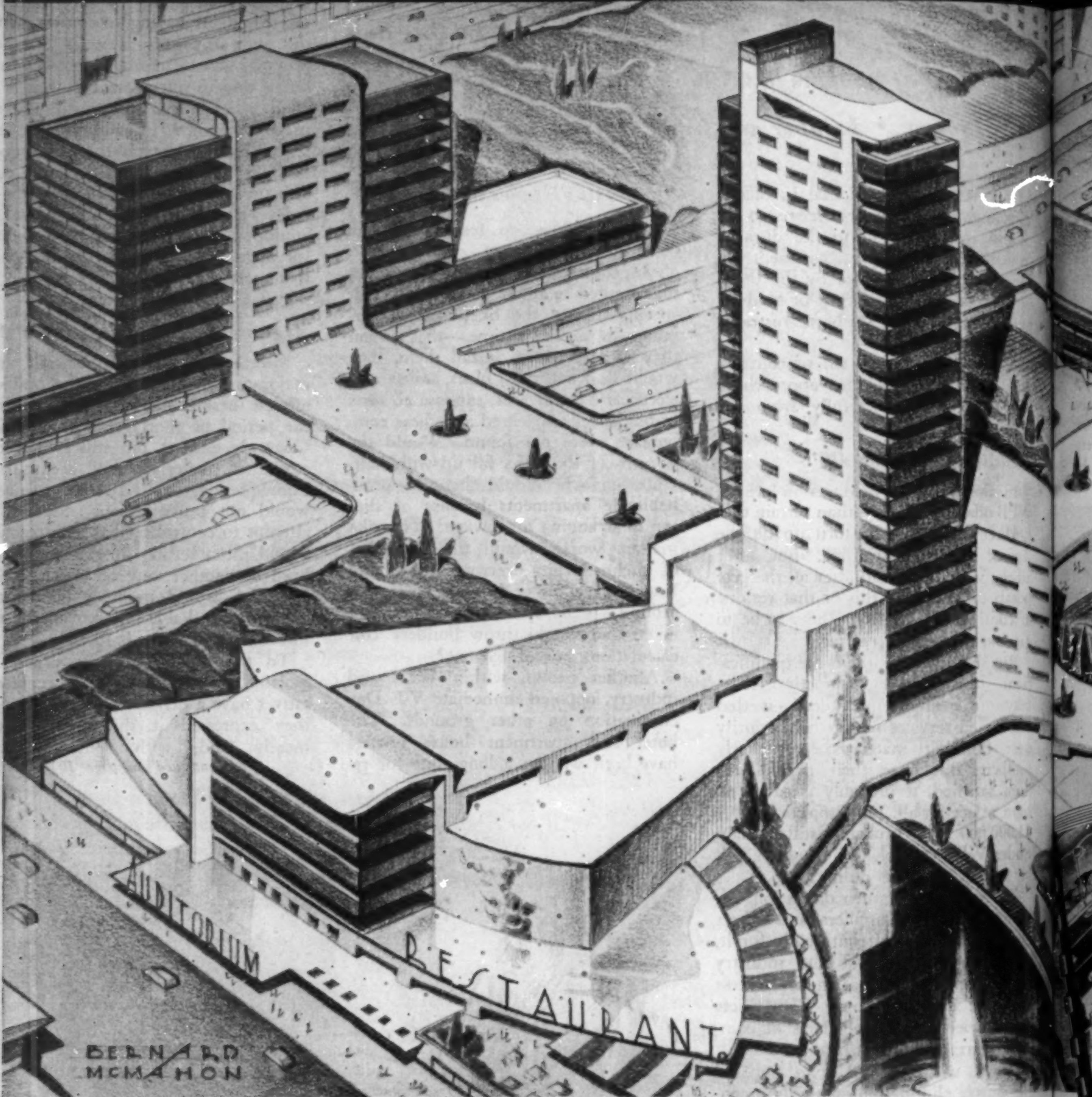
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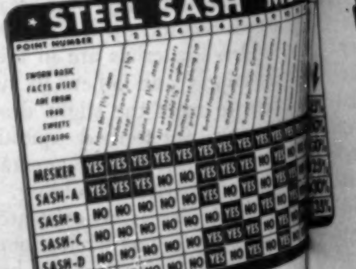
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PUBLIC BUILDINGS

THE RECORD REPORTS

(Continued from page 7)

"American industry will take care of all that," not going into details of how. But the idea and hope is this: as building starts, banks will avoid making loans until they feel that their customers have lined up their materials, getting firm prices and reasonably sure delivery dates. The builders themselves, they promise, are not utterly innocent and will be cautious. Under the Sherman Act there can, of course, be no agreement to exercise such caution and, regardless of the Act, builders are hardly likely to enter into one.

Elimination of L-41 requires modification or a reinterpretation of a directive agreed upon several years ago by the Army, the Navy and WPB, under which only construction needed for the war is permitted. As reinterpreted, construction would be allowed "if it did not hurt the war effort." This would cover priority for armed service purchases. Because Army buying conceivably could suddenly change the whole supply picture, builders want continuing information on production and requirements. They also want WPB's checks on supplies to go on after the war within the Commerce Department.

Meanwhile, WPB is working swiftly to get rid of the countless limitation orders which hold back the manufacture of supplies. It is hoped that the much-publicized "spot authorization plan," allowing manufacturers with available labor and materials to turn out anything, will contribute to the stockpile. More important, L-orders are being dropped.

Price Controls

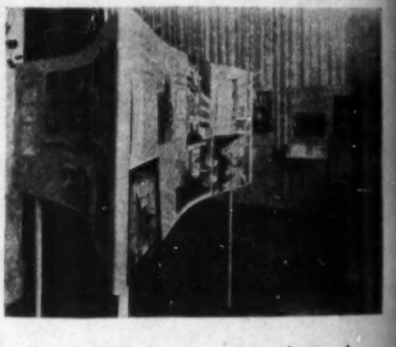
While the construction industry fought against civilian allocations of supplies after V-E Day, it wants continued price controls over materials and components, if not over completed structures. Builders feel that the effect of such ceilings will be to provide firm prices as they shop around for thousands of items, so that cost sheets will not turn into masses of error. Bowles, himself, fears that reconversion could start an inventory boom like that of 1919-1920 and insists on continued regulation.

Bottleneck Danger

The questions being asked by builders, with minor variations, are those of every industry awaiting reconversion. The great Washington issue is whether suddenly booming civilian manufacture will uncover scores of bottlenecks no one can foresee now, just as, two years ago, war production stumbled again and again upon unexpected shortages. The general disposition is to look for protection to the manufacturers themselves and those who finance them, but to prevent speculation for inventory profits by

(Continued on page 12)

AMERIKA BYGGER
NATIONALMUSEUM
ÅTVIDABERGS



Window display describing the "America Builds" exhibit, and (right) modern architecture installation at the exhibit. Below, Crown Princess Louise and Crown Prince Gustov Adolf of Sweden, with Designer Beckman, at the exhibit's formal opening

AMERICAN ARCHITECTURE SHOWN IN SWEDEN

Cabled reports from Stockholm, Sweden, indicate that the recent exhibition of American architects held there from June 14 through August 15 was highly successful. In the first two weeks following the formal opening, it was visited by more than 7,000 people.

The exhibition, "America Builds," was held in celebration of the 25th anniversary of the founding of the Swedish American Society in Stockholm and its sister organization, the American Scandinavian Foundation in New York. It was prepared, at the request of the National Association of Swedish Architects, by the Museum of Modern Art, New York. Emphasis was on contemporary American architecture, new building methods and the use of new materials; included were descriptions of both public and private housing, and town planning.

Some 900 photographs, plans, charts, maps, etc. were collected by the Museum for the exhibition. The show was divided into four parts: (1) devoted to the pioneers of modern American architecture — Richardson, Sullivan and Wright; (2) a group of outstanding buildings erected during the past ten years; (3) housing in war and peace, with emphasis on the building program for the war emergency, and on prefabrication and new materials; (4) a study of urban and rural planning as illustrated by the work of the Chicago Planning Commission and the TVA. Other material included an exhibit of American historical buildings, and a collection of interiors, painting and sculpture.

"America Builds" reopened in Gotenburg on September 1st, will subsequently be shipped throughout Sweden.

Look to the future through screens made from Saran—a Dow Plastic

The hot, humid, steaming jungles of the far east have served as an exacting proving grounds for insect screen. But, tough as these extreme conditions may have been on most materials, they did not affect screens made from Saran . . . for this Dow plastic is tough itself—as tough as they come.

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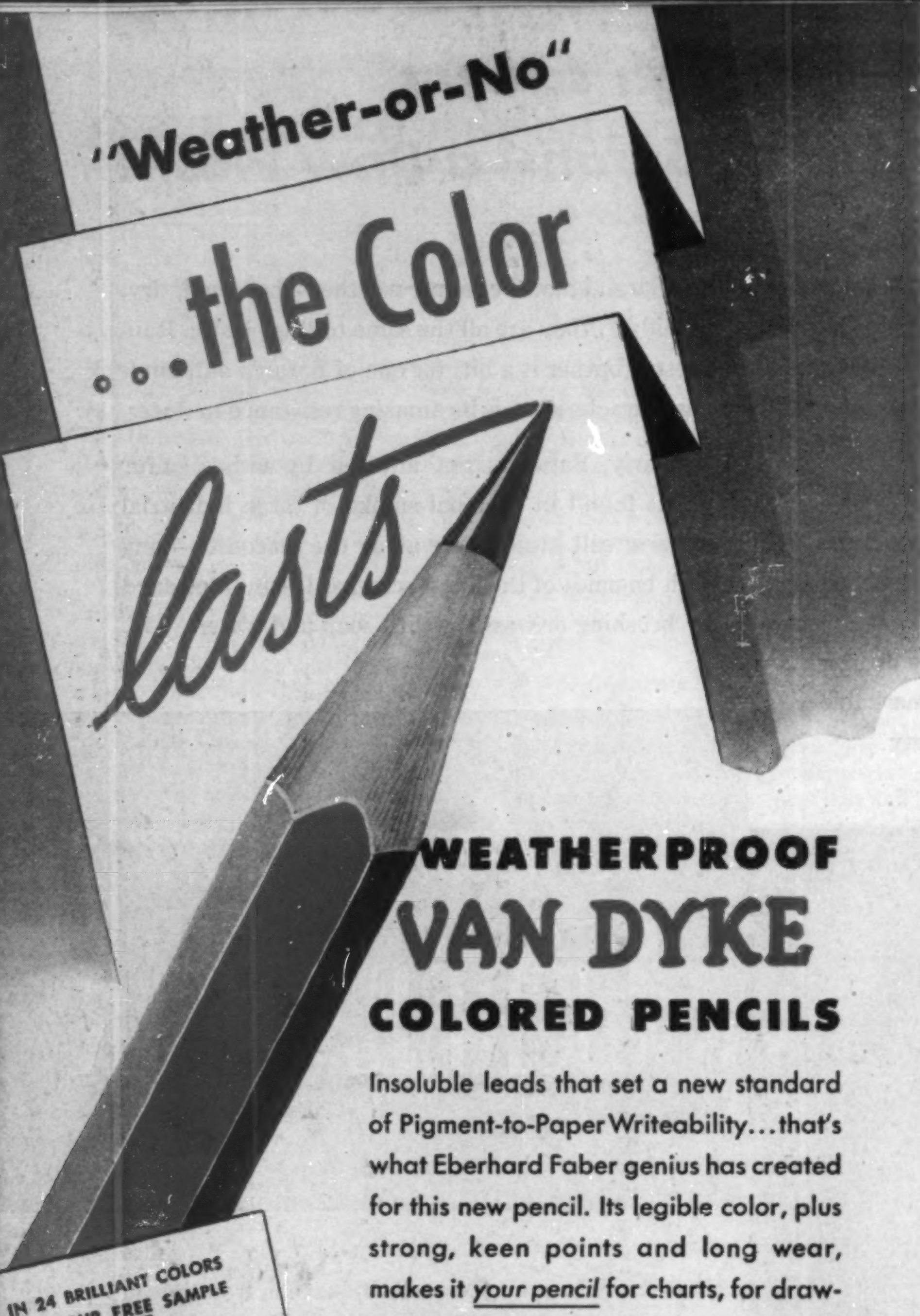

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(Continued from page 10)

retaining price ceilings.

In building as in other industry, there is some hope that government surpluses will be available as a supply center of last resort, offering manufacturers suddenly finding themselves short of some key item the same service that they ordinarily would get from a local jobber. There is little evidence that the surplus disposal agencies will be able to catalogue their wares with sufficient speed and exactness to step into this role. In response to continued agitation by distributors, they are selling almost primarily through "established trade channels." Although the drive to make them do so was aimed at giving wholesalers and retailers a bounty, it may help producers by filling the stockrooms of their familiar suppliers.

Public Construction First?

Not necessarily. Men who keep in close touch with local government officials are convinced that civic construction is lagging badly. Local governments, they say, are putting off everything until they find out the extent to which the federal government will help foot the bill. This is something that they will not find out from the present Congress. Since the supply situation is not too sure, this may prove fortunate.

According to estimates circulated confidentially within WPB, enough materials will become available to allow the doubling of civilian construction in 1945.

Lumber and Labor

These estimates and others like them assume broad improvements in building lumber which, indeed, appears to be in its way already. The shortage of labor in forests and mills is a problem to be reckoned with. Another difficulty is the insufficiency of heavy tires for trucking northwest timber. Army officers say that the tire industry thus far has been successful in recruiting new labor so that the transport troubles are not necessarily permanent.

When he first took direction of WPB, Krug included lumber among materials which would continue under control. According to officials of the Producers' Council, backed by some WPB men, other basic building supplies are good. Plumbing, heating, and electrical equipment, they say, must be put into production quickly.

Generally, Washington labor experts expect that there will be enough workmen to go ahead after V-E Day. How-

(Continued on page 14)

Fire Protection . . . *is in Your Hands*

The man who plans has destiny right in his hands . . . he cannot afford to "play with fire."

Life and property hang on his decisions. There's no middle ground. Some buildings improperly planned are condemned to a blazing end . . . others are fire protected with an armor of gypsum plaster that cannot burn.

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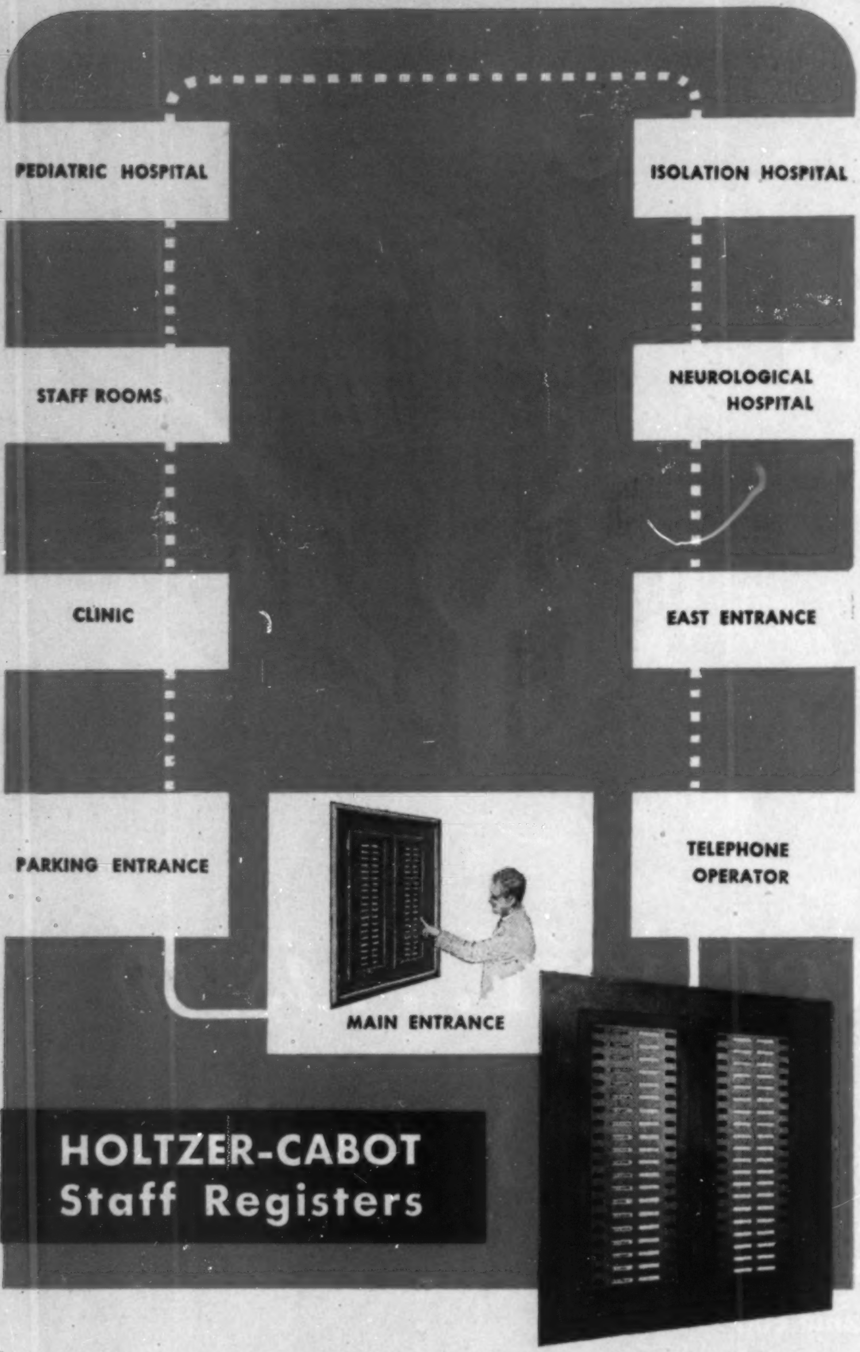

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See SWEET'S ARCHITECTURAL FILE

(Continued from page 12)

ever, communities that are producing chiefly for the Navy may remain in war production, holding onto labor. In areas where cutbacks will be greatest, union men fear unemployment may promote evasion of labor agreements.

Congress and Building

For all practical purposes, Congress has stopped working. Nothing more of importance to the building trades is to be expected this year. Amendment of the GI Bill of Rights, lengthening the period during which the government will guarantee housing loans to veterans, must await the new session.

The Taft Committee staff has put together the replies to its questionnaire sent to most of the organizations, public and private, interested in postwar housing. But, at best there can be no hearings until after Election Day and some of the members of the Committee cannot be sure that they will be returned.

Similarly, the proposal to set up a federal research agency to investigate building costs was made too late in an election year. Work by staff members goes on but nothing can come of it until next year. The approach of elections also put a stop to the fussing about public versus private housing. The Senate committee which had been holdings hearings on how to finance District of Columbia slum clearance is reported to have turned over its data to a private research agency for further study.

◆ ◆ ◆

MULTIPLE DWELLING LAW

New York's Multiple Dwelling Law came under fire on September 21 when Assemblyman MacNeil Mitchell of Manhattan opened public hearings on its possible recodification. The hearings were held by the State of New York Joint Legislative Committee to Recodify the Multiple Dwelling Law, as a preliminary step in the Committee's assignment to recommend clarifications and revisions calculated to streamline the statute in accordance with modern conceptions.

Two points were stressed by a majority of the 15 or 16 speakers: (1) that the law stands in urgent need of "weeding out" and general clarification; (2) that some sort of Board of Appeals or Review should be set up to interpret the law and hand down decisions on possible exceptions, situations not specifically covered by the

(Continued on page 16)

* * * "before them there were no such locusts as they" * * * * * *

Of the tens of thousands of airplane engines built for American "locusts" three out of every four have been tested and proven thru gruelling hours of test-cell operation, insulated by

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DOORS

Here the greatest man-made industrial noise—approaching the roar of thunder—beats and pounds on those who must work close to the operation. To dampen this—to confine it to the test-cell, making working conditions bearable—is truly the greatest task ever performed in sound insulation.

FIRECRAFT SOUND-PROOF DOORS are successfully performing their part of this task in the big engine plants, thus increasing efficiency by protecting the workers from avoidable fatigue.

Out of the demands for war production, FIRECRAFT "door specialists" have developed new techniques in door construction, hardware design and installation methods. Meeting the needs of modern industrial construction, they offer, in addition to sound-insulation, full protection against such industrial hazards as fire, oil, fumes, water or air-pressure, explosions and operational abuses.

When your industrial construction or reconversion project involves any door problems our engineers are at your service, on request.

"And the locusts went up over the land and rested in all the coasts * *; very grievous were they; before them there were no such locusts as they * *."

EXODUS 10:14

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QUALITY METAL PRODUCTS

FIRECRAFT DOOR COMPANY

3321 SOUTH WALLACE STREET

CHICAGO 16, ILLINOIS

Representatives in All Principal Cities

Efficiency Moves in when NOISE moves out

Banish the noise demons and you will help clients eliminate costly mistakes

IT is easy for errors to occur in office work now when staffs are stretched thin and work piled high. More errors are bound to occur in a noisy office. The thought-diverting clatter of the noise demons makes it hard to think clearly and work efficiently. You can help your clients rid their offices of the noise demons, reduce the cost and irritation of the errors they cause, help them get out more work each day—with an economical ceiling of Armstrong's Cushiontone.

Cushiontone absorbs up to 75% of all noise striking its surface, thanks to the 484 deep holes in each 12" by 12" unit of this fibrous material. This high efficiency is *permanent*—not even repainting can affect it. Armstrong's Cushiontone is quickly installed and easily maintained. And it's an excellent reflector of light.

See Sweet's Section 11, File No. 1. Write for free booklet to Armstrong Cork Company, 2410 Stevens Street, Lancaster, Pa.

ARMSTRONG'S CUSHIONTONE

Made by the makers of Armstrong's Linoleum and Asphalt Tile

THE RECORD REPORTS

(Continued from page 14)

law, and similar matters. A third point frequently stressed was the advisability of making the law state-wide in its application, rather than limiting it to New York City as at present.

Among those who spoke was Councilman Stanley M. Isaacs, representing the United Neighborhood Houses of New York. Since every old-law tenement in New York in use today, Mr. Isaacs said, is at least 43 years old (the Tenement House Law, forerunner of the Multiple Dwelling Law, was passed in 1901), and many of them were built from 50 to 70 years ago, they have served their usefulness and really should all be torn down. The housing shortage, however, forces their continued use, and certain measures should be taken to bring them further up to date. Specific recommendations offered by Mr. Isaacs in this respect included: regulations demanding that no room without windows should be occupied for living purposes; that heat and hot water service be installed in every building; and that a date be fixed after which there must be a private toilet for every family *inside* the apartment.

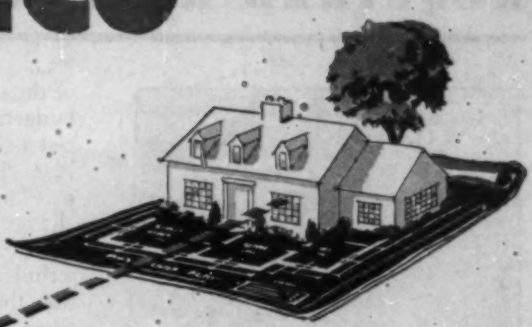
Joseph Fink, secretary of the Housing Committee of the Brooklyn Bureau of Charities, declared that the Multiple Dwelling Law has been amended over 300 times since its adoption in 1929. As an example of its resulting cumbersomeness, he said, "An architect must read 6,500 words—I counted them—if he wants to find out how large a court must be. And 4,500 words must be read to find out how to tear down an abandoned building!"

Adolph Goldberg, president of the Brooklyn Chapter of the A.I.A., said that the Multiple Dwelling Law today is "about 95 per cent good." He recommended, however, that the definition of a tenement house be changed to read "a dwelling for more than three families" rather than "for three families or more." He also suggested that mechanical ventilators should be permitted in all types of dwellings, nonfireproof buildings included.

The fact that the Multiple Dwelling Law does not at present apply outside New York City permits lower construction costs in the suburbs and increases the trend toward moving out of the city limits, Sumner Sirtl, speaking for the Allied Taxpayers Defense, Inc., maintained. As a further argument in favor of making the law state-wide in its application, he said he could see no reason why other communities should not have the protection given

(Continued on page 120)

TO MAKE A BETTER CECO WINDOW



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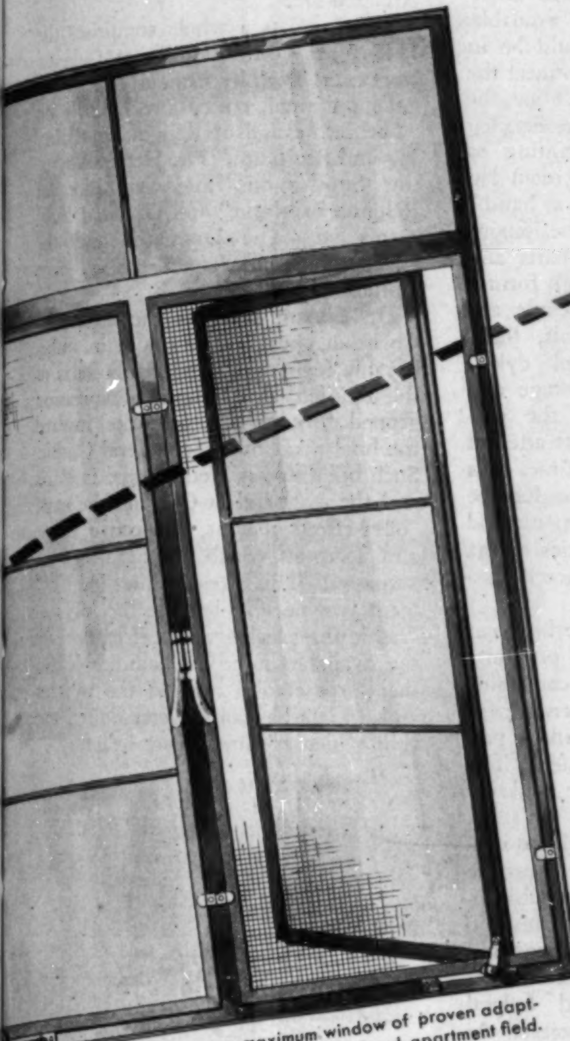

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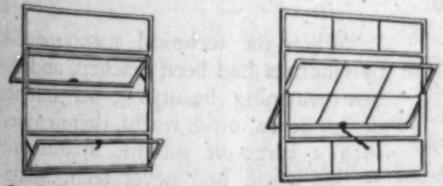

Ceco's line of Steel Windows includes Light and Intermediate Casements, Basement Windows, Architectural Projected, Commercial Projected and Pivoted Windows, Continuous Windows, Security and Utility Windows, Mechanical Operators, etc.

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What the CECO engineered window means to Architect, Builder and Home Owner

1. Precision Engineering means *an extra tight all weather seal—keeps out cold, dust, rain—keeps heat in.*
2. Precision Engineering means *easy opening, and closing—no sticking, warping, or swelling. Ceco Windows always fit.*
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7. Precision Engineering means *all these important advantages at no premium cost!*

MAKES THE BIG DIFFERENCE IN CECO CONSTRUCTION PRODUCTS

REQUIRED READING

Projects proposed for one Pennsylvania county. From "Planning Beaver County"

PLANNING BEAVER COUNTY, PA.

1943. An Analysis of Existing Conditions and Potential Development. By Michael Baker, Jr. Rochester, Pa., The Baker Engineers, 1944. 19 by 12 in. 98 pp. illus.

Even with "master plans" and planning reports springing up like mushrooms all around us, this attractively presented report on the past, present and probable future of Beaver County, Pennsylvania—"the third largest industrial producer in the Commonwealth of Pennsylvania and seventh in the Nation"—is noteworthy. Mr. Baker and the Planning Division of his organization have spared no effort to give the Beaver County Commissioners what they wanted—an exhaustive study of present conditions and a master plan complete in every detail, physical sociological and economic.

Starting with a county-wide survey, the researchers built up a great body of facts from individuals, organizations of all kinds, libraries, government agencies, and a group of research technicians in the field, put there for the express purpose of gathering information and opinion. Next, a number of plans, charts and graphs were prepared for an analysis and evaluation of the data thus obtained. From all this was developed a "Master Development Plan" and a more specific five-year Public Improvement Plan.

"Planning by government, for public improvement, must preserve 'Home Rule' and place Industry in its rightful place as a most valuable factor in community life," Mr. Baker says in his letter of presentation. "Planning, design, construction and administration should be financed locally to the limit of the community's ability under sound budgeting before asking outside financial help, if such should be available. Plans for postwar years should be in part long-range and flexible to meet the changes through the years. On the heels of planning should come detailed technical design and blueprinting so that there will be no employment lag when the day of conversion is at hand."

The proposals outlined in the Report, and clarified by numerous charts and plans (many of them in color), form a complete program. They include airports, parks, swimming pools, highways, bridges, flood control dykes, water treatment plants, sewerage and sewage disposal. Realizing the economic impossibility of trying to attempt this entire program at one time, it is suggested that a plan of procedure be adopted using the step-by-step method in accordance with the abilities of the various communities to finance such a program.

Of the total $52,432,500 to be spent on the five-year improvement program, local communities would contribute approximately $5,000,000 by assessment or other means while the county's participation would be $2,763,000. The bulk of the balance would be made up as follows: $15,526,200 from the state; $7,815,800 from the federal government; and $18,565,000 from the private industries. The remainder would include expenditures for land acquisition shared by the federal government and private enterprises and labor costs contributed by the state and federal agencies for reforestation projects. As a cushion to take up the shock of postwar unemployment, this five-year program is expected to provide 3,004,500 man-days of work.

One of the most important of the projects is that for flood control, since in the past 132 years the county has averaged one flood every 2½ years along the Ohio and Beaver rivers. Approximately 18½ miles of dikes, levees and flood control walls are recommended. Action already has been taken (see "The Record Reports," p. 128) toward the carrying out of this part of the Baker program.

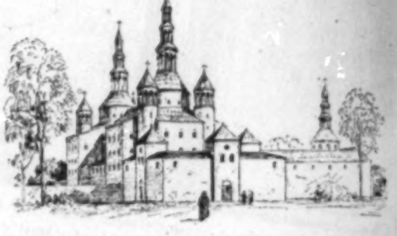
THE ARTS AND RELIGION

Albert E. Bailey, Ed. New York (60 Fifth Ave.), The Macmillan Co., 1944. 5½ by 8¼ in. xiv + 180 pp. illus. $2.50.

Architects contemplating postwar church design should find in this book a good bit that will interest them. In the first place, there is the introductory chapter by Dr. Bailey; then there is the large number of photographs of temples and churches the world over; and finally there is the splendid chapter by Professor Kenneth Conant of the Harvard Graduate School of Design on "The Expression of Religion in Architecture."

The book as a whole comprises the 1943 Ayer Lectures given at Colgate-Rochester Divinity School: Dr. Conant's on architecture, Dr. Bailey's on "The Expression of Religion in Painting and Sculpture," Dr. Henry Augustine Smith's on "The Expression of Religion in Music," and Dr. Fred Eastman's on "The Dramatist and the Minister." Each chapter has its own bibliography.

Dr. Conant sums up the history of Christian church architecture in unbelievably few pages. Apparently he is of the opinion that religious expression groped through the centuries toward the final perfection of medieval Gothic. Such buildings as Notre Dame in Paris and the cathedral at Chartres, he says, "offer effects of light, perspective, color, and acoustics which are hardly to be surpassed. This breathtaking development was possible because the logic of Gothic engineering was perfect, because the available stone was admirable for the purpose, and because the masons and carvers had an understanding and skill which is almost past belief.



Monastery of Centula (Kenneth Conant drawing). From "The Arts and Religion"

"When the technical stage marked by Chartres had been reached, and the heart-warming beauty of its interior design given to the world, there ensued such a surge of sublime architecture as the world had never seen. Monumentality, permanence, and dramatic composition belonged to the new cathedral buildings by inheritance. The new structural element gave them an unequaled unity."

Of special interest are eleven drawings of Dr. Conant's research projects in ancient architecture, published here for the first time. These include an interior view of the destroyed Monastery Church of Cluny, two views of Old St. Peter's, Rome (4th century), two of 6th century St. Sophia, Istanbul, and a West view of Reims with addition of spires, six of which were originally planned, but never built.

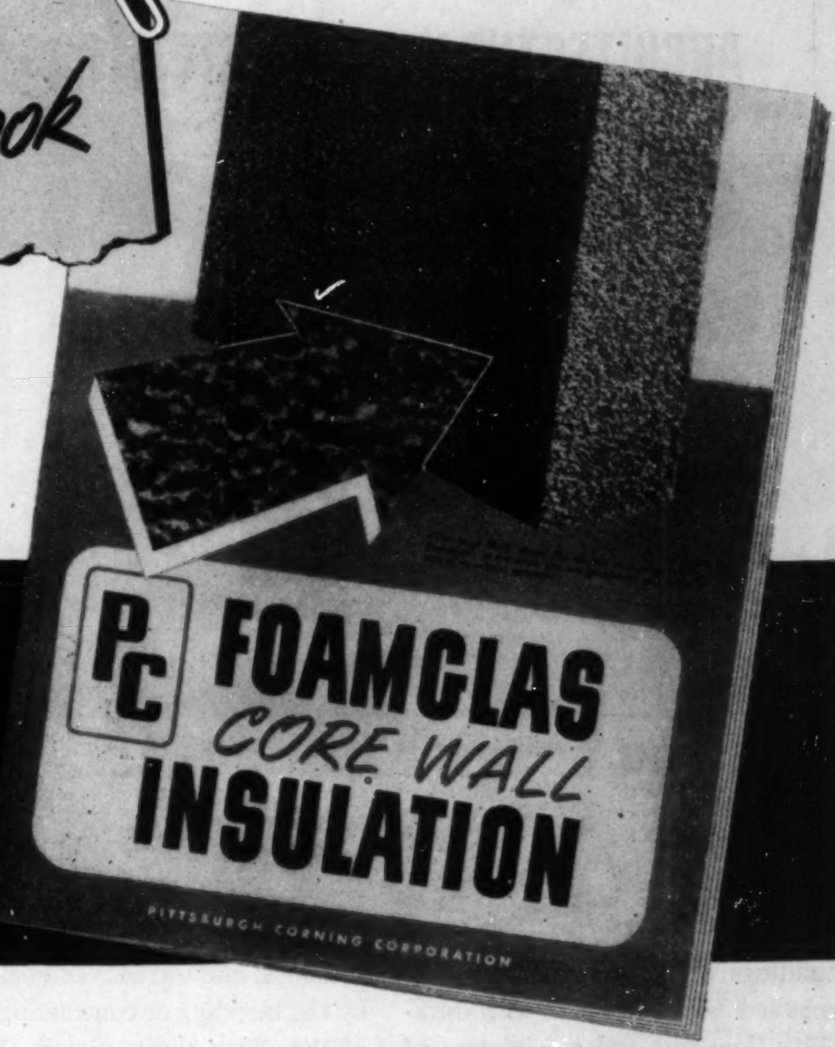
(Continued on page 28)

MEMO

Send for this new book

IT'S FREE

It contains complete information on PC Foamglas the permanent insulation for corewalls that becomes an integral part of the wall.



ARCHITECTS will find, in this new brochure, complete engineering data—charts, tables and explanatory text—all the information needed by men who plan efficient insulation—and keep a sharp eye on costs.

In core walls, PC Foamglas becomes an integral part of the wall structure when tied in to brick or other backing and facing. It does not pack down, swell, shrink, warp or rot. Being glass, it does not deteriorate, is an efficient vapor-seal and water-stop as well as a permanent insulation. It helps to control temperature and humidity—to prevent condensation.

The same qualities that make PC Foamglas the ideal insulation for core walls have won it general acceptance for use in duct work, floors, and roofs in many types of industrial plants.

When your plans include insulation problems, our specialists will be glad to consult with you on the most advantageous use of PC Foamglas. Meanwhile, fill in and mail the convenient coupon and your copy of the new booklet, "PC Foamglas Core Wall Insulation" will be sent to you without charge or obligation.

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Dr. Pepper Bottling Plant, Kinston, N. C. Thin, precast Architectural Concrete Slabs made with Atlas White cement by Arnold Stone Co., Greensboro, N. C. Facing is white; name in red vitreous aggregate is cast in the slab. Architect: John J. Rowland, Kinston, N. C. Contractor: H. L. Coble, Greensboro, N. C.

DR. PEPPER'S bottling plant at Kinston, N. C., is one of many buildings where distinctive appearance has been combined with durability, low cost and a minimum of maintenance by using pre-cast Architectural Concrete Slabs.

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Color is governed by the aggregates selected—granite, quartz, ceramics, and vitreous enamel—and by the blending or contrasting tones of the Atlas *White* matrix. Varied and interesting textures are created by exposure of these aggregates after casting.

For full information, ask for the book, Architectural Concrete Slabs. Write to Atlas White Bureau, Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York 17, New York.

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AR-ACS-46

ATLAS WHITE CEMENT

For pre-cast ARCHITECTURAL CONCRETE SLABS

(Continued from page 26)

BUILDINGS AND EQUIPMENT FOR ARCHIVES

Bulletins of the National Archives, U. Government Printing Office, Washing 25, D. C., June, 1944. 5⅞ by 9⅛ 32 pp.

Here is a bulletin on a special ty of building which architects will fi highly useful. Consisting of three ar cles, the entire bulletin is devoted t the physical plant in which valuab documents should be preserved.

The first of these is an article o planning archives buildings, by Lo A. Simon, who was Superintendent o the Architectural Division, Treasur Department, at the time the Nation Archives Building was planned an constructed. The second, on collabor tion between archivists and archite in planning archives buildings, is b Victor Gondos, Jr., A.I.A., chairma of the Committee on Archives Buil ings of the Society of American Arch vists. The third, by William J. Va Schreeven, Head Archivist in the Vi ginia State Library, Richmond, dea with equipment needs to be considere in postwar planning.

Such pertinent matters as plannin construction details, fire protectio lighting, cleaning facilities for the re ords, room for expansion, and so fort are all discussed in one or another o the three articles, and a complete pi ture of the special needs of archive buildings is well presented.

INSULATION AND YOUR HOME

By Arthur McK. Stires. New York 2 (1270 Sixth Ave.), The National Miner Wool Assn., 1944. 8½ by 10 in. 23 p illus.

Colorfully illustrated and writte in layman's language, this booklet doe a good job of presenting the story o insulation to the general public. M Stires, architectural editor of *Hou and Garden,* has made it interesting; group of "eminent experts" has cert fied the correctness of the facts; an the National Mineral Wool Associatio has confined its efforts in its own be half to the last three pages.

The various types of insulation a described—rigid sheets or board flexible batts and blankets of miner or vegetable fibers, fill insulations o mineral wool made of rock, slag, glas etc., and reflective insulations of mate rials such as aluminum foil. In add tion, a "yardstick of comfort" is offere with a series of charts by which th reader can measure the present com fort (or discomfort) of his home an

(Continued on page 30)

Now together

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PORTLAND IRON WORKS
WADE MFG. CO.

WE are pleased to announce that the PORTLAND IRON WORKS, well-known maker of Fleming Drains, and the WADE MANUFACTURING COMPANY have now consolidated their manufacturing and distributing facilities.

This action has been taken to offer better service to west coast users of drains and plumbing specialties, to make available a complete line of such products—including the WADE Wacor Water Hammer Arrester, and to insure prompt delivery everywhere.

Warehouse stocks will be carried in Portland, Oregon, San Francisco and Los Angeles, California, just as Wade maintains similar stocks in other parts of the country.

Quality Products for 3/4 of a Century

WADE

Drains and Plumbing Specialties

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(Fleming Drains)

● Since 1868 Wade has specialized in the design and manufacture of drains and plumbing specialties. Through these years the Portland Iron Works (Fleming Drains) have earned an equally outstanding reputation. Add to this priceless experience the unexcelled facilities of both companies for casting and machining such products, and you have every reason for standardizing on the Wade line. In time-tested basic design, in sound metallurgical structure, in features that mean ease of installation and long life, Wade offers your greatest dollar value.

- **Floor Drains**
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WADE Wacor Arresters

STOP WATER HAMMER

Here at last is a positive, time-tested way to stop the annoyance and damage of water hammer permanently. Inexpensive; easily installed; needs no maintenance or adjustment. Sizes for all operating conditions, in all types of buildings. No. 6, above, serves the average home. List price..............................$12.00

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WADE-PORTLAND IRON WORKS DRAINS *(FLEMING DRAINS)*
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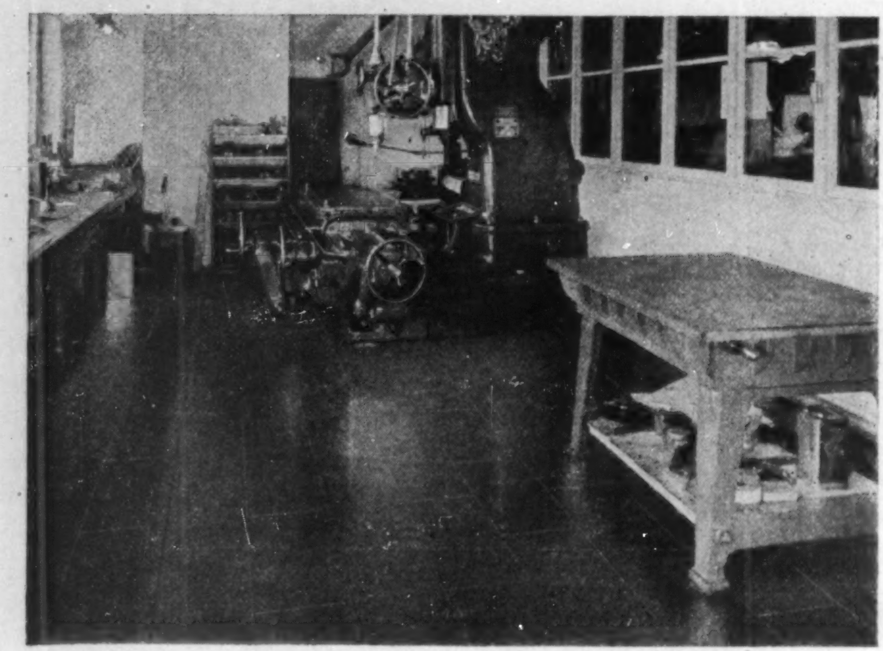
TUFF-TEX

will be tougher in

194X



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From the very first, Tuff-Tex has been enthusiastically accepted by architects and plant engineers. Why?

First, Tuff-Tex is tough! It stands up under grease, abuse, trucking, dropping of heavy objects, and constant foot traffic. Second, Tuff-Tex is easy to maintain. Its smooth, grease-resistant surface can be cleaned simply and economically. Third, Tuff-Tex can be installed quickly—and repaired quickly in case of accident or alterations. Fourth, Tuff-Tex is low in first cost.

Many of America's leading war plants have found Tuff-Tex the answer to their floor problems. They *know,* because they have put Tuff-Tex to the severe test of wartime manufacturing conditions. After the war, Tuff-Tex will be even better—even tougher—even more resistant to the special abuses commonly found in manufacturing plants.

Write us for complete data on this modern industrial floor and a list of leading American corporations who are using Tuff-Tex.

★ The Tile-Tex Company

101 Park Avenue, New York City • Chicago Heights, Illinois

REQUIRED READING

(Continued from page 28)

see how insulation will not only make for more pleasant living, but will also lower the fuel cost. Finally comes a brief summary of where and how to use insulation, and a word of advice on choosing the type to use.

TECHNICAL BOOKS

PRACTICAL DESIGN FOR ARC WELDING

By Robert E. Kinkead. Vol. 1. Troy 1, Ohio (Hobart Sq.), The Hobart Bros. Co., 1944. 8¾ by 11½ in. vii + 100 design plates. $3.50.

This is the first in a series of three volumes of design plates, many of which have already been published and distributed in loose-leaf form. It is not a text book, but a practical working book for the designer, engineer, welder or manufacturer interested in arc welding. A record sheet, including a work sheet in graph form, is provided opposite each plate. A cross reference "Short Cut to Design Ideas" index indicates the numbers of various design plates that involve certain specific details such as bases, bosses, columns, frames, gussets, etc., that are common in many welding operations.

PLASTICS

Postwar Building Studies No. 3. London W.C. 2 (York House, Kingsway), H. M. Stationery Office, 1944. 6 by 9¾ in. 48 pp. illus. 1s. New York 20 (30 Rockefeller Plaza), British Information Services, 30c.

This is the second of the Postwar Building Studies series published for the British Ministry of Works that has come to our attention. Prepared by the British Plastics Federation, it is concerned with the application of plastics to the building industry.

Part I of the report presents a "simplified technical survey of plastics" which is one of the best we have seen. Part II is the kernel of the whole—the application of plastics to building uses. This is conveniently subdivided into seven groups such as applications to the building structure, fittings, applied finishes, etc. Part III is concerned with Design and Standardization, Part IV with conclusions and recommendations of the Plastics Committee. The Appendices include lists of actual and potential applications of plastics, of specifications, and a glossary of terms. There is also a chart of chief plastics materials which, to our way of thinking, is rather over-complicated.

One very pertinent recommendation

(Continued on page 32)

How to make the best use of clean Gas Heat

JANITROL Gas Fired Unit Heaters first attained their leadership by supplying quick, clean, automatic heat in "hard-to-heat" places . . . places where larger, more expensive equipment couldn't be used..

Because these units performed so satisfactorily and installations were so simple and inexpensive, alert heating men were quick to utilize these flexible, self-contained units for more and more types of applications instead of bulky, often time, complicated systems.

New type Janitrol Unit Heaters incorporating many exclusive features, improved design and operation had "arrived" just before the outbreak of war. No other unit heater combines *all* the advantages that Surface Combustion gas experts have engineered into Janitrol equipment. .

Records of satisfied users, including some of the country's largest manufacturers, down to the small store operator, reveal astonishing low operating costs, with fuel savings ranging as much as 25%.

If you want economical heat, directed where it will be most useful; the complete unit suspended out of the way, requiring no valuable floor space, for a beauty salon or steel foundry, there's a type of Janitrol unit ideally suited to meet the B.t.u. requirements.

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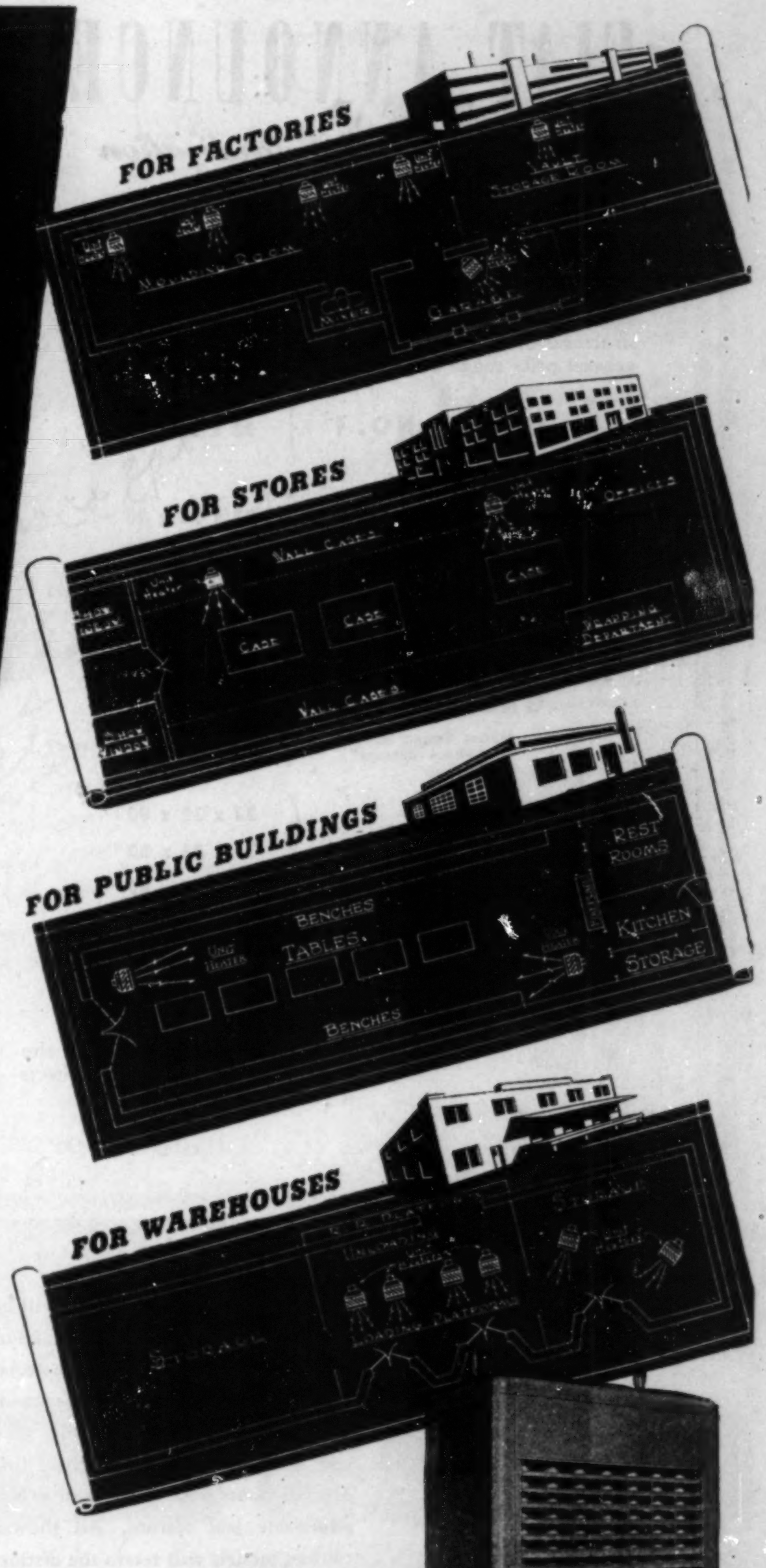
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MOLDING ROOM
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GARAGE
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CASE
OFFICES
SHOW WINDOW
WRAPPING DEPARTMENT
FOR PUBLIC BUILDINGS
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FIAT ANNOUNCES

a postwar standardization of shower cabinet sizes

To establish a standard for architects and plumbers to use in future construction, Fiat is presenting the following *sizes to the trade now for the purpose of expediting postwar planning. Fiat showers will be classified into four groups according to structural design (details to be announced later) based on the general price range of prewar models.

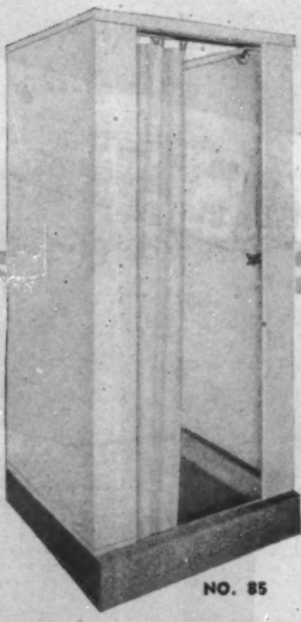
GROUP NO. 1
Skipper type, low cost shower
32 x 32 x 76

GROUP NO. 2
Cadet type, medium priced shower
32 x 32 x 80
36 x 36 x 80
36 x 36 x 80 (corner)

GROUP NO. 3
Marine Ensign type, for "above average" installations
32 x 32 x 80
36 x 36 x 80
40 x 40 x 80 (corner)

GROUP NO. 4
Admiral type, de luxe class
32 x 32 x 80
36 x 36 x 80
40 x 36 x 80
36 x 40 x 80
40 x 40 x 80 (corner)

*Measurements conform to the American Institute of Architects 4" unit module system.



NO. 85

AVAILABLE FOR DELIVERY NOW

No. 85—the best shower made under wartime material restrictions. Full size, 36 x 36 x 78—Deep type receptor — Heavy ¼" MASONITE walls.

No. 80—Volunteer, has remarkable strength and is easily erected. Size, 32 x 32 x 76 and 30 x 30 x 76.

Fiat's postwar line of showers will be modernized to take full advantage of advanced design and recent material developments. Included will be standard types of receptors for tile, slate and glass walls and a complete line of glass doors with the exclusive Fiat adjustable jam feature. All shower cabinet models will retain the distinctive Fiat characteristics — leakproof, beauty and trouble-free construction that have made Fiat showers the standard of value with the trade for over twenty-five years.

FIAT METAL MANUFACTURING COMPANY
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21-45 Borden Ave., Long Island City 1, N. Y. • 32 S. San Gabriel Blvd., Pasadena 8, Cal.

(Continued from page 30)

is made: "The study of plastics materials and the methods of working them should be included in courses of instruction on building subjects in technical institutions where they do not already form part of the syllabus, so that those engaged in the building industry have opportunity to learn more about plastics and acquire skill in their manipulation."

Research and investigation is recommended as follows: (a) use of resin-bonded laminated wood as a structural material; (b) development in the manufacture and utilization of sheet plastics; (c) trials of plastics tubing as piping for domestic use; (d) manufacture of relatively large building components such as staircases and window frames.

HOUSING

POSTWAR PLANNING AND HOUSING

Albany 6 (210 State St.), New York State Assn. of Real Estate Boards, Inc., 1944. 6 by 9 in. 38 pp. $1.00.

Looking ahead to the expected building boom after the war the Postwar Planning and Housing Committee of the New York State Association of Real Estate Boards has certain very definite comments to make. The Committee does not approve of public housing, or of housing subsidy, but recommends "locally administered relief sufficient to cover a minimum rent, or rent certificates." It does not approve of federal subsidies for the acquisition of land in blighted areas, but prefers to "let the values in the blighted areas become thoroughly deflated." Government assistance in the housing field, in the Committee's opinion, should be limited to finance:

"When the government provides subsidized housing at the taxpayers' expense, it discourages private building; but when it sets up standards of housing quality and subdivision design, it prevents the jerry builder from foisting inferior housing upon the public and protects other builders from this unfair competition. When the government insures mortgage loans for all housing projects that are economically sound and self-liquidating, it does not add new burdens to the taxpayers' load of debt but it broadens the housing market by reducing interest cost."

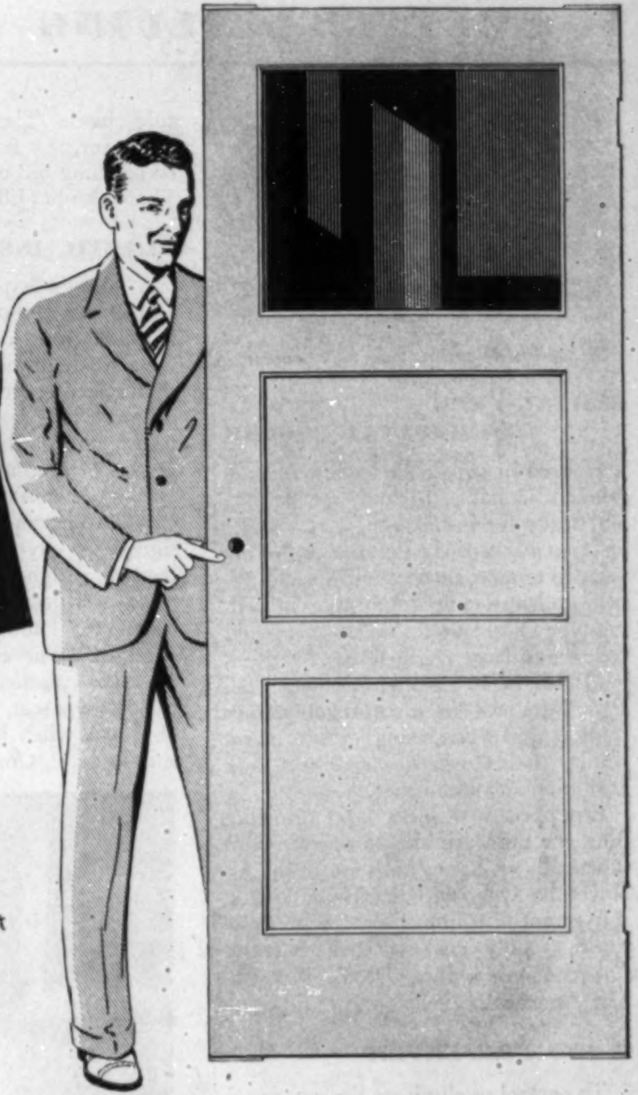
Working up a tax program for real estate, the Committee suggests several planks: (1) to "prick the bubble" of

(Continued on page 116)

NOW, MORE THAN EVER,
DOUGLAS FIR DOORS
MEET MODERN REQUIREMENTS

For Door Specifications

Attractive 3-panel interior doors—basic, all-purpose layouts in keeping with today's design trends—assure the utmost in client satisfaction when you specify **Douglas Fir** Interior Doors. What's more, these fine doors are durable, long-lasting—and if FACTRI-FIT features are specified (see below) they go up quicker, fit better, hang better.

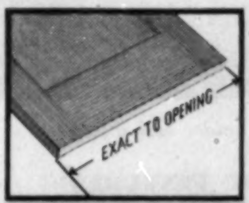


Plan now to feature these improved Douglas Fir Doors. Write for catalog showing Interior Doors, Tru-Fit Entrance Doors, and new specialty items.

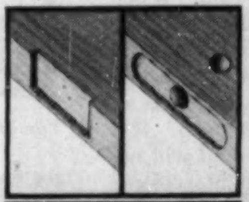
FACTRI-FIT

PRECISION - MADE DOUGLAS FIR DOORS

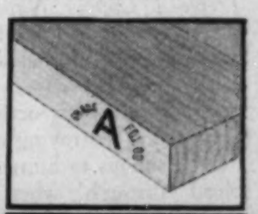
Specify Douglas Fir Doors for essential jobs today, for every job tomorrow. Write for catalog showing complete series of Interior Doors, Tru-Fit Entrance Doors and new specialty items.



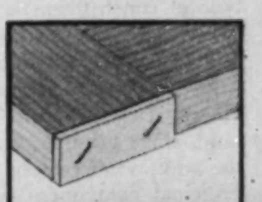
1 FACTRI-FIT doors are pre-fit at the mill, trimmed to exact size, ready to hang without sawing or fitting.



2 FACTRI-FIT doors may be ordered completely machined at your option—gained, bored or mortised by high-speed precision tools.



3 FACTRI-FIT doors (like all Douglas Fir Doors) are edge grade-marked for ease in ordering, specifying and supplying.



4 FACTRI-FIT doors are scuff-stripped to protect the precision-cut corners during handling and shipping.

Remember! NATURE MAKES DOUGLAS FIR Durable!

Durable Douglas Fir Doors are made from all-heart-wood, vertical-grain, soft, old-growth Douglas Fir.

Now available only for essential building. Douglas Fir Doors will be ready again when war needs lessen.

Douglas Fir DOORS

FIR DOOR INSTITUTE
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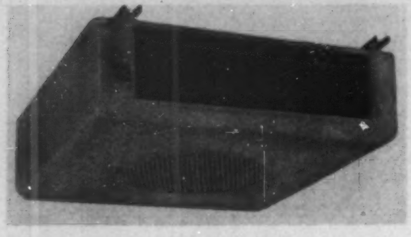
FOR BETTER BUILDING



Streamlined ceiling-type air cooler

CEILING-TYPE HORIZONTAL COOLER

Housed in streamlined white enamel cabinets, suitable for all refrigerants and ready for installation, a new series of *Spasaver* air coolers has been developed to meet the demand for cleanliness and attractive appearance in ceiling-type horizontal coolers for cold rooms and large refrigerators.

Models in 10 sizes are available, designed for use in institutions, restaurants, food processing plants and similar fields where cleanliness and sanitation are important.

Equipped with new type propeller fans, the units are said to operate with practically no noise. Coils are of the fin and tube type, with exclusive kinetic refrigerant distributor. Motors are slow-speed, totally enclosed ball bearing. Drayer-Hanson, Inc., 738 E. Pico St., Los Angeles 21.

WOOD PRESERVER

To control or eliminate dry rot, fungi and molds in wood, whether the lumber be in an industrial structure, on a farm or in a home, an application of *Triple-A Copper Naphthenate Wood Preserver,* applied by brush, spray or dipping, is said to deeply penetrate and impregnate the wood, thereby sealing it against the destructive influences of these wood destroying organisms. It is non-poisonous to humans, and will not bleed through when light colored paints are applied over it. Quigley Co., Inc., 527 Fifth Ave., New York 17.

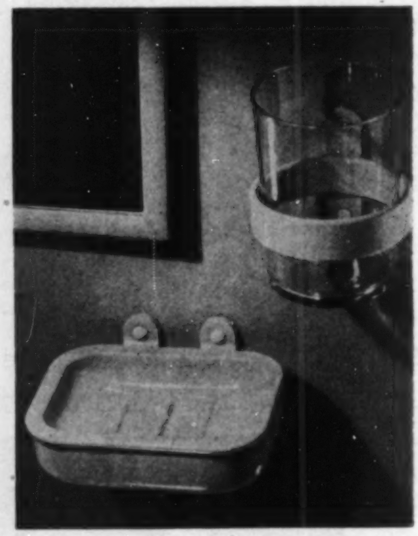
TOUGH FLOORS

For floors in industrial plants a new type of construction is offered—*Ferem "Blue Temper,"* a complete material said to contain the desirable characteristics of hardeners, admixtures and processed components. It contains no sand, stone or silica, and requires only the addition of cement and water. The principal component of Ferem has a rating of 9 in hardness on the Mohs scale, only one point less than the diamond. Furthermore, the ductility of a Ferem floor is said to be comparable to that of a blue tempered steel cold chisel. The material can be used either for new floors, or for resurfacing or patching old ones. A. C. Horn Co., 43-36 10th St., Long Island City 1, N.Y.

PLASTIC INSULATION

A glass-base plastic made in sheets and known technically as *GMG-17-P-5,* is made from a fine weave of continuous filament fiberglass fabric with a thermosetting resin said to be more resistant to flame and to arcing than resins ordinarily used in standard grades of laminated material.

The material—available now in sheets, tubes and rods—is specially designed for electrical applications which require a high order of flame and fire resistance, together with a high arc resistance and high mechanical strength. The chief advantage of the fiberglass plastic, and the reason for its development, is the lower toxicity of fumes when it burns. Formica Insulation Co., Cincinnati.



Tumbler holder and soap dish of Tenite

PLASTIC FIXTURES

All new Navy vessels are being equipped with soap dishes and tumbler holders of ivory-colored Tenite, a cellulose acetate butyrate product of Tennessee Eastman Corp., Kingsport, Tenn.

Pieces consist of tumbler holder, soap dish holder with removable soap dish, and a large fixed soap dish. Single cavity dies are used for each part, with molding cycles ranging from 20 seconds for the tumbler holder to 40 seconds for a large soap dish.

Advantages claimed for the Tenite fixtures are: permanent color; speed of production; and a lustrous finish which does not tarnish or corrode. Molded for the Navy by E. B. Kingman Co., Leominster, Mass.

PLASTIC SCREEN CLOTH

Already on duty with the armed forces overseas, *Lumite,* a new plastic insect screen cloth, is woven from Saran, a product of the Dow Chemical Co. Rust- and corrosion-proof, Lumite is said to have a number of other important advantages: strong and resilient, it resists dents and bulges; it permits light to enter through the plastic "wire" itself, as well as through the mesh, thereby admitting more light to a room so screened; it is flameproof—it will melt when exposed to flame heat, but will not burn; it is easy to handle because it is light in weight, has no sharp points, and can be cut with ordinary household scissors. Complete production at present is going to the armed forces. Chicopee Mfg. Corp., 40 Worth St., New York 13.

STANDARDIZED SIZES FOR SHOWER CABINETS

Working with other shower cabinet manufacturers toward establishing a standard for architects and plumbers to use in future construction, the Fiat Metal Manufacturing Co. has announced a postwar standardization of shower cabinet sizes. Fiat showers will be classified into four groups as follows, all measurements conforming to the A.I.A. 4-in. module system:

Group 1 (low cost)—32 by 32 by 76.

Group 2 (medium priced)—32 by 32 by 80; 36 by 36 by 80; 36 by 36 by 80 (corner).

Group 3 (higher priced)—32 by 32 by 80, 36 by 36 by 80, and 40 by 40 by 80 (corner).

Group 4 (de luxe)—32 by 32 by 80, 36 by 36 by 80, 40 by 36 by 80, 36 by 40 by 80, and 40 by 40 by 80 (corner).

STORE DESIGN

Responding to a widespread demand by retail merchants for information on store modernization, the National Retail Furniture Association (666 Lake Shore Dr., Chicago) is sending to press a book which will contain the results of an exhaustive survey on store design from the research laboratories of industry and the recommendations of leading commercial architects.

The book is compiled as a manual in which each phase of modern store designing will be outlined. Illustrated designs for store fronts, windows, interiors, displays, elevators, air conditioning, heating, fire protection, equipment, service departments and receiving and shipping spaces will be shown. Publication is scheduled for early fall. Copies will be sent to all members of the Association, and will also be available to other merchants seeking ideas for modernization.

(Continued on page 110)

Small Houses in a Large Way

◆ The recent announcement of the new War Production Board head, Julius A. Krug, is an added incentive to planning now. The government policy is now made definite—release of all possible materials for civilian production as soon as possible after the victory-in-Europe. War needs will still come first, the European occupation and relief will still demand materials and equipment and crating lumber (which is building lumber too). And the material for the war in the Pacific will make continued demands on new production and stock piles. But our capacity to produce has so increased that civilian production can proceed about as fast as plants can be reconverted.

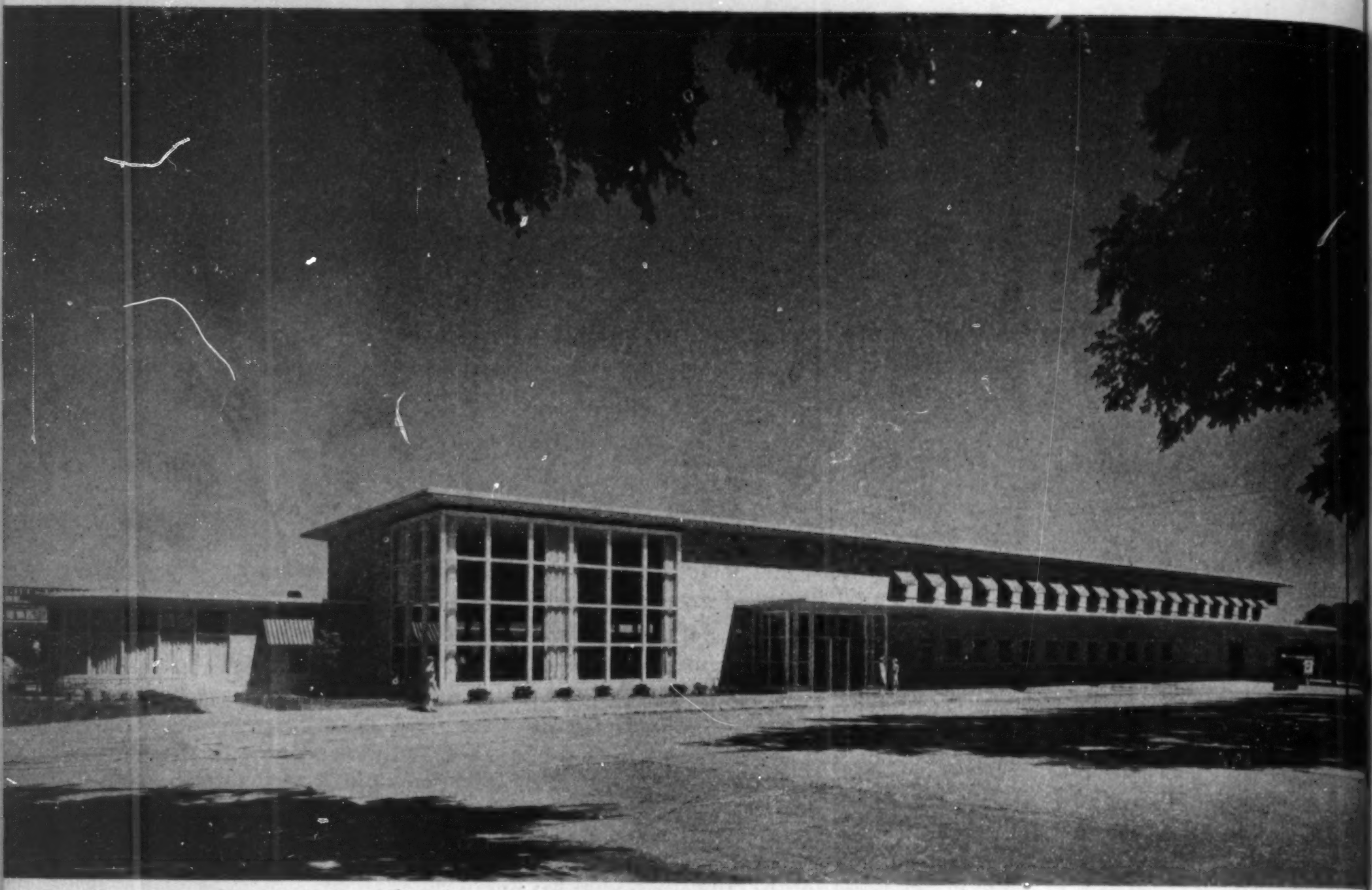
◆ And the financing money is available—in unprecedented quantity. The money put aside in savings, we're told, is enough to purchase twice the country's 1940 total of civilian goods produced. Building will compete with all other civilian goods, cars, and radios, luxuries and necessities of every kind and description. But it will be able to compete—home building especially. The home-of-the-future has been brought home to the public. Propaganda for war bond buying and the financial and manufacturers' advertising have stressed the home-of-your-own idea. Even the exaggerated pictures of the push-button-miracle-home have had one good effect—that of making John Doe think about, and want, a new home. Popular magazines and women's magazines have done a tremendous job of selling "better homes for better living." Whether they have raised the housewife's hopes too high and doomed her to some disillusionment (when she tries to build or buy within her budget) is beside the point. She *is* interested, she *is* sold on the idea of a new and better house. And she should get it.

◆ Developers are planning to capitalize on the situation. Large scale developments are being planned—and planned by architects too—from site plans to decorative schemes, in larger proportion than ever before. Developers have seen the advantages—including the added sales appeal—of architect-planned communities. All the leading prefabricators are depending on architectural talent for their designs.

◆ Individuals too are planning the homes they want, and now have money for. Especially is this true in the price class above five thousand, the house class banned by war. These are the houses that will set the pace in design and equipment. "Style seeps downward" in home-design as well as dress-design. And these are the architect-designed houses, designed for the owner's own occupancy, to meet both his real and fancied needs. These are the houses which incorporate creative thinking, that demonstrate the practicality of new ideas. These are the houses that are watched by all who build—for themselves or for sale or rent. Their form and their features are freely borrowed all down the line.

◆ And for their form and features the architect is responsible. Actually, everyone lives in an architect-designed house whether its design is bought or "borrowed," and no matter how skillful or inept the borrowing. The house of the future—the postwar house is, and will be, what the architect makes it. And the architect is alert and active and is breaking new trails for all to follow. The home builder can rest assured the architect will not let him down.

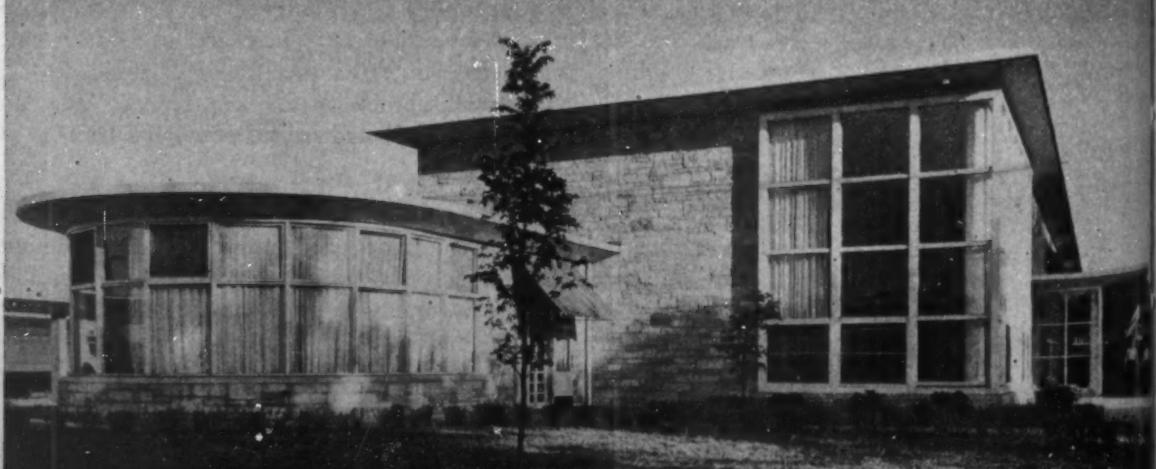
Kenneth K Stowell
EDITOR



RAILROAD STATION—POSTWAR PIONEER

Chicago, Burlington & Quincy Station, Burlington, Iowa

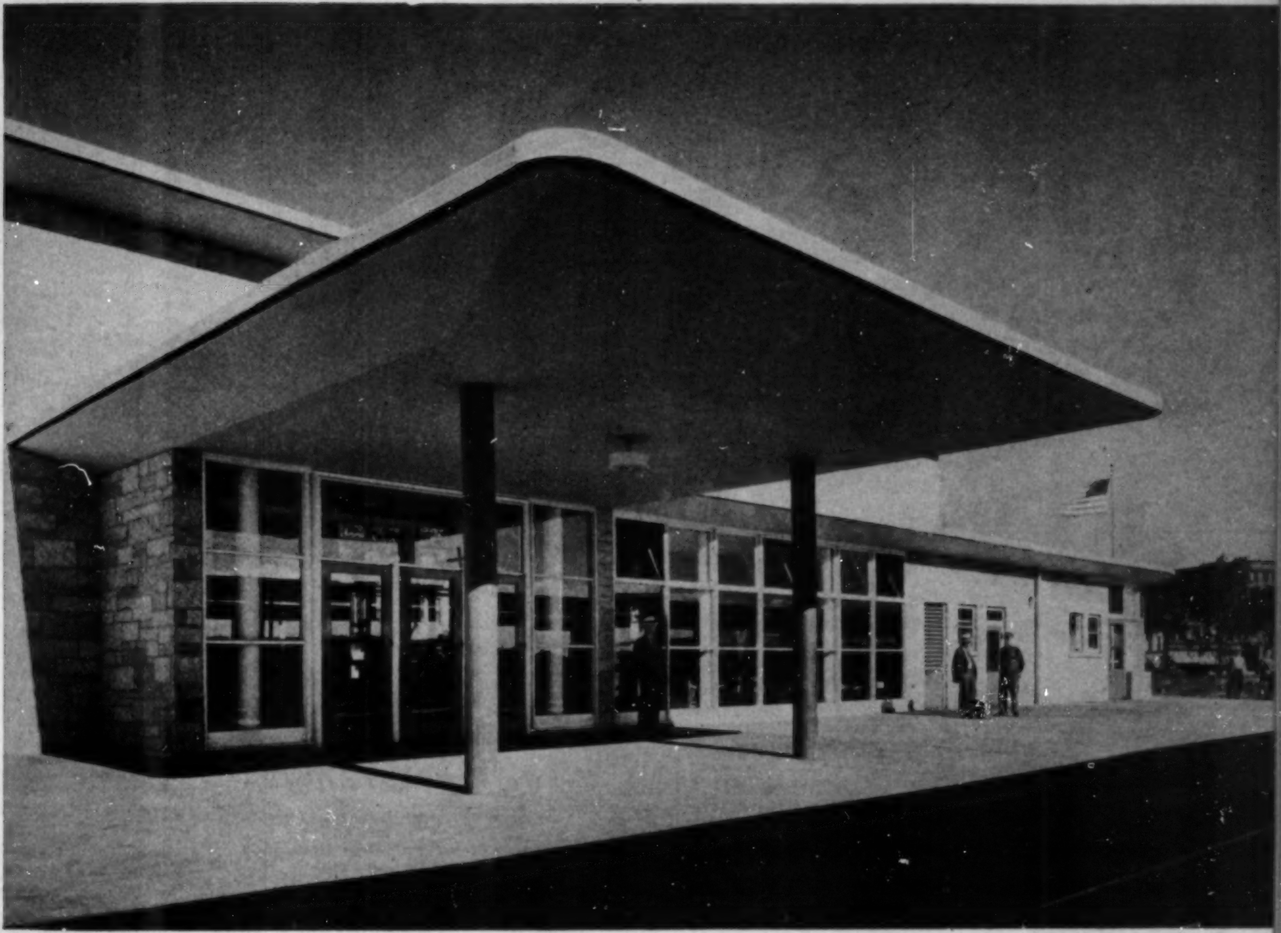
Holabird & Root, Architects

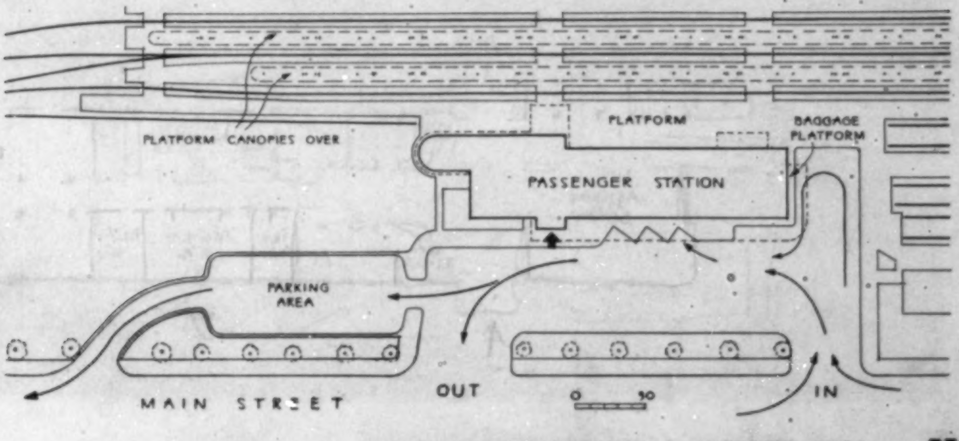


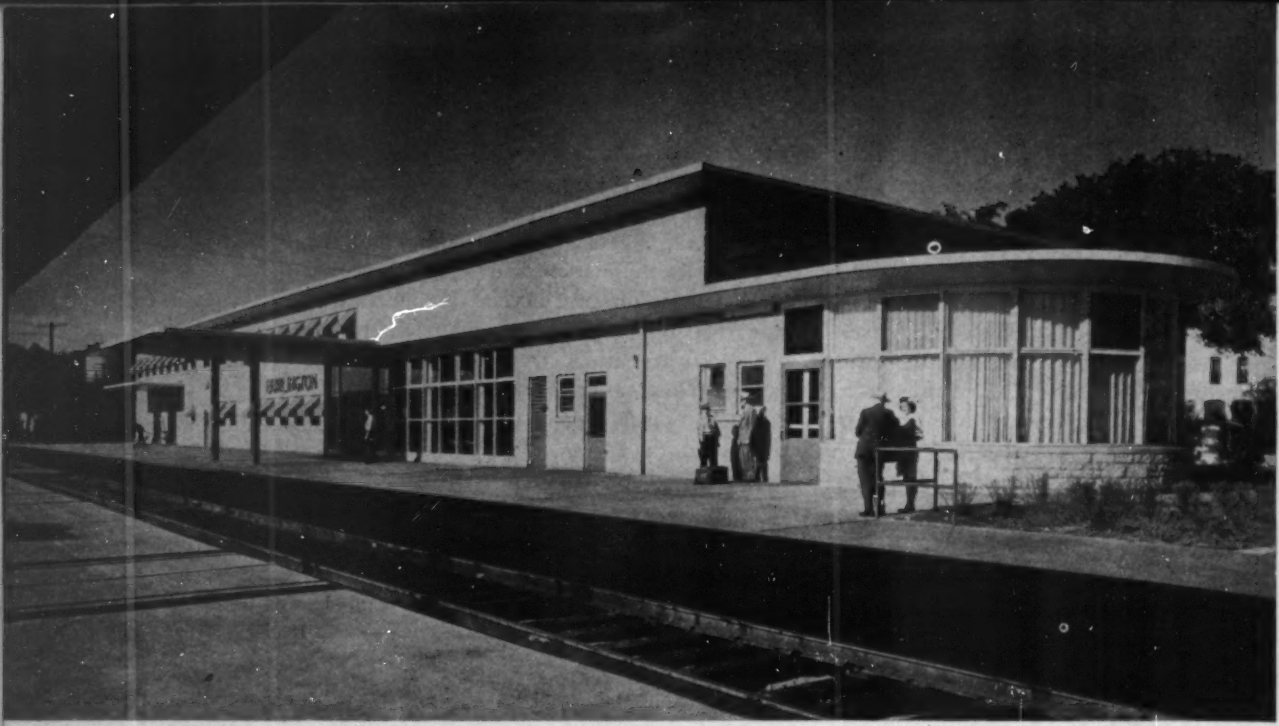
ONE HESITATES to report the facts about this new railroad station. If the real story became widely known it might start a wave of arson which could easily spread to every city in the land. But the fact is that this handsome building was the eventual result of a fire, which destroyed the old station, model 1882. Think what might happen if chambers of commerce were to see this station, and begin to get ideas!

Seriously, the building has a significance beyond its individual success as a design solution, however notable that might be considered. For it provides a stimulating and tangible idea of what postwar railroad travel might be, if the railroad companies should undertake a much-needed program of station building. And a glimpse of an improvement of a type which, probably more than any other, would stimulate a new civic enthusiasm in now-dismal downtown areas. Indeed in this case, say the architects, the owner was wise enough to support a good planting and gardening scheme,

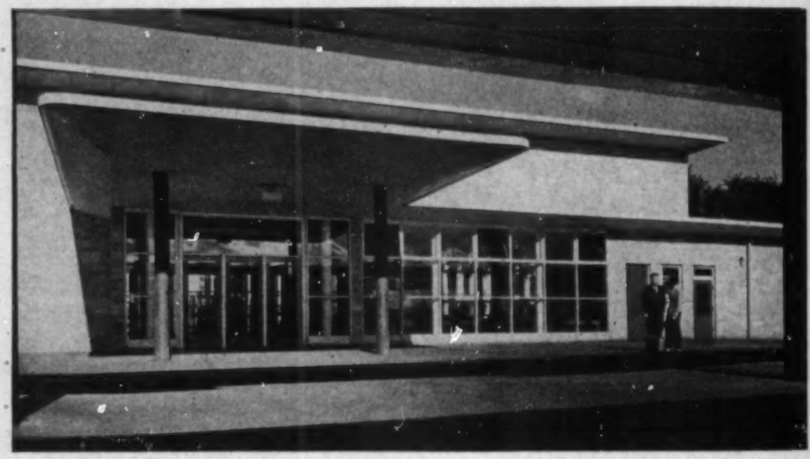
Hedrich-Blessing photos

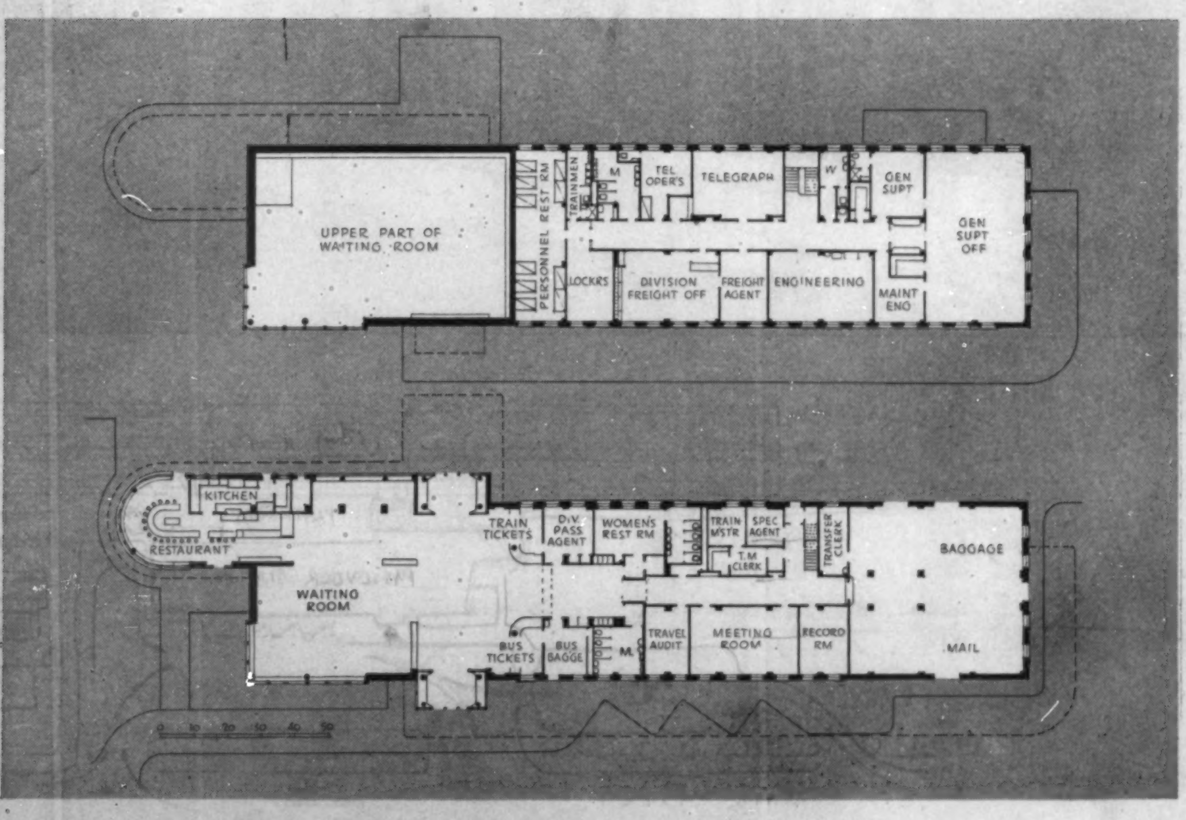


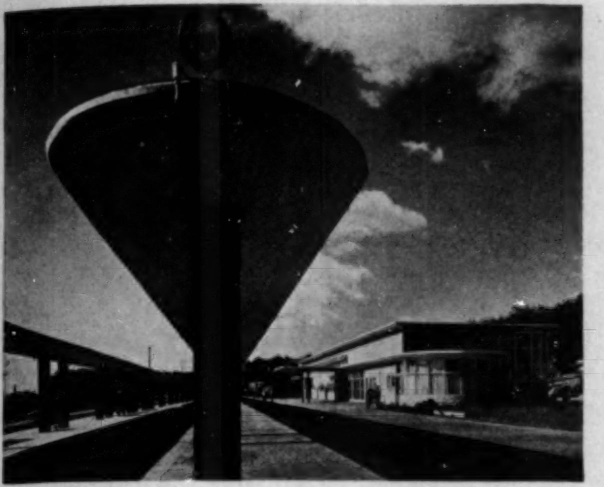




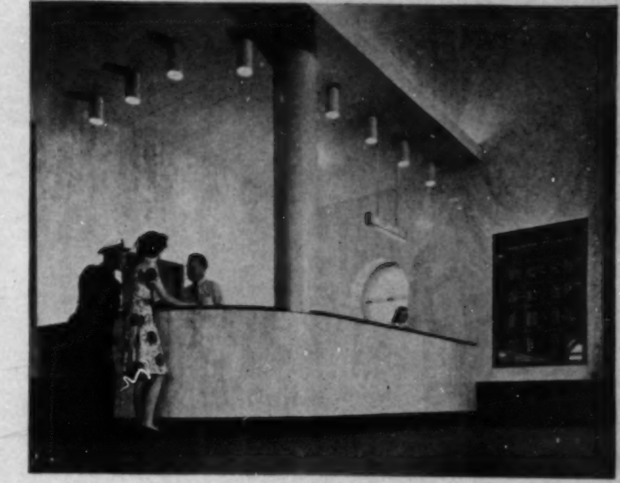
Short, straight passage has been provided for passengers, between train, bus and parking lot. The restaurant is freely accessible from street, station, or train. All vehicular traffic is from the right







Platform canopies, of poured-in-place reinforced concrete, are of deck design, to admit maximum light when train is in



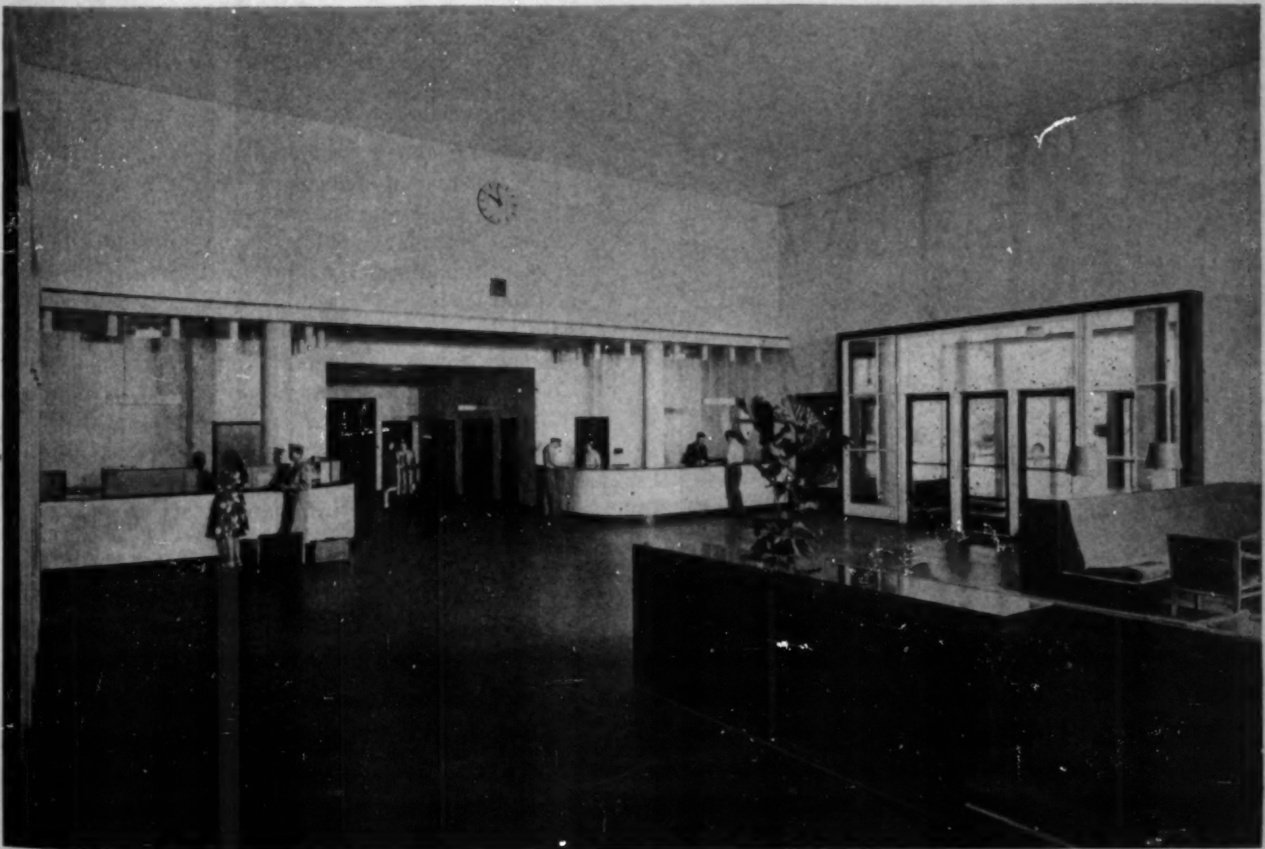
Bus ticket counter, with down light on counters by incandescent lamps, and cold cathode lighting in trough above

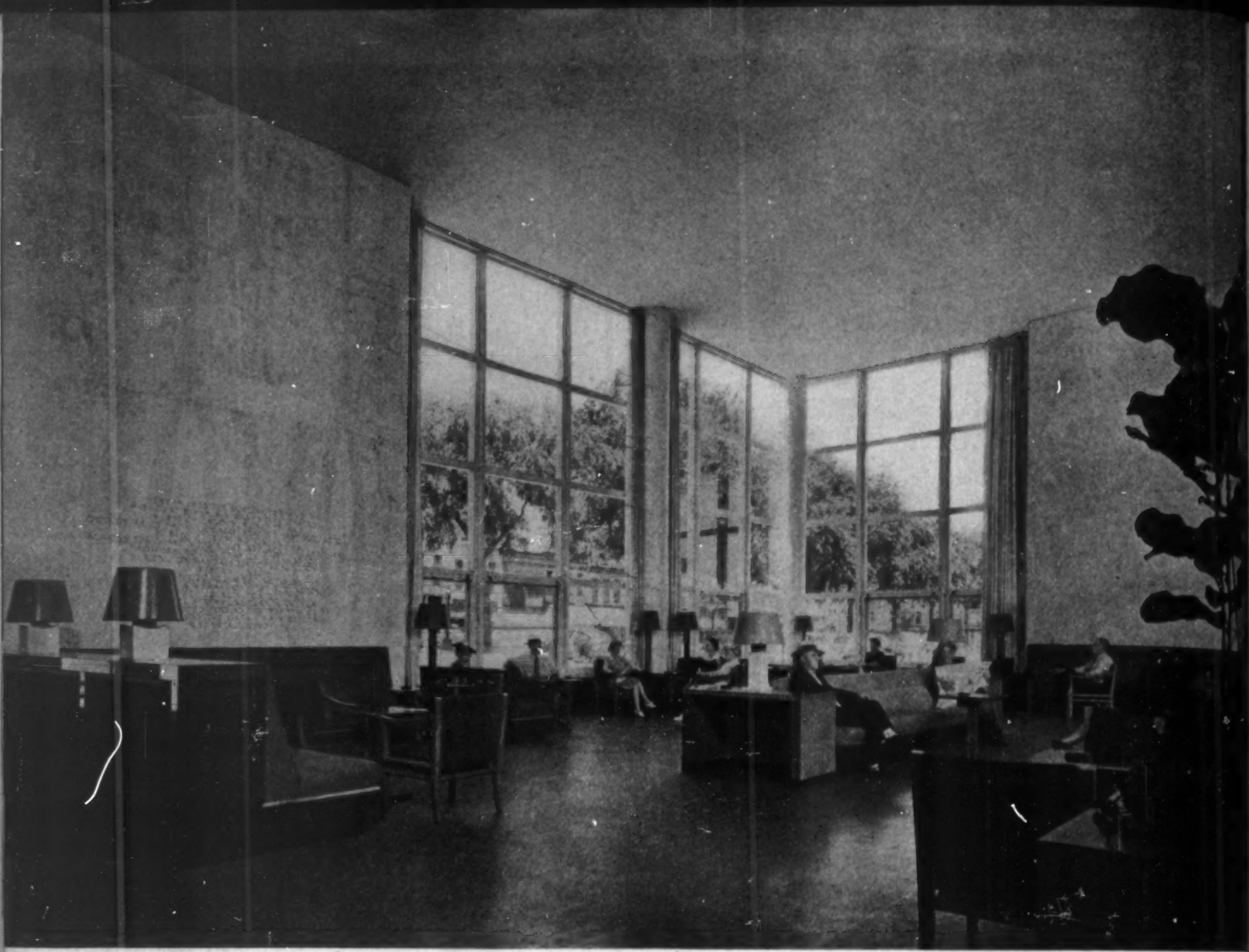
promising a handsome setting for the building in years to come. The town caught the enthusiasm, they continue, and a scheme for painting all the three-story buildings surrounding the railroad plaza is now in the making.

Whether or not this was regarded as a test project, it did receive some special attention because Burlington was an important terminal point, and the town that gave the railroad its name. It also identifies it with the road of the Burlington Zephyrs, pioneers among the modern Diesel-powered streamliners. Important also is the fact that this is a combined bus and railroad station, serving the company's own feed bus lines. Further, in addition to the usual station facilities, the building houses the terminal staff and personnel in quarters on the second floor.

The exterior is of random patterned Wisconsin Lannon stone. The building rests on pile foundations; has a reinforced concrete frame with cast monolithic cornices and 16-ft. canopies. Platform canopies are of poured-in-place reinforced concrete. They were constructed

Main waiting room has travertine walls, black terrazzo floors, bright yellow enameled columns



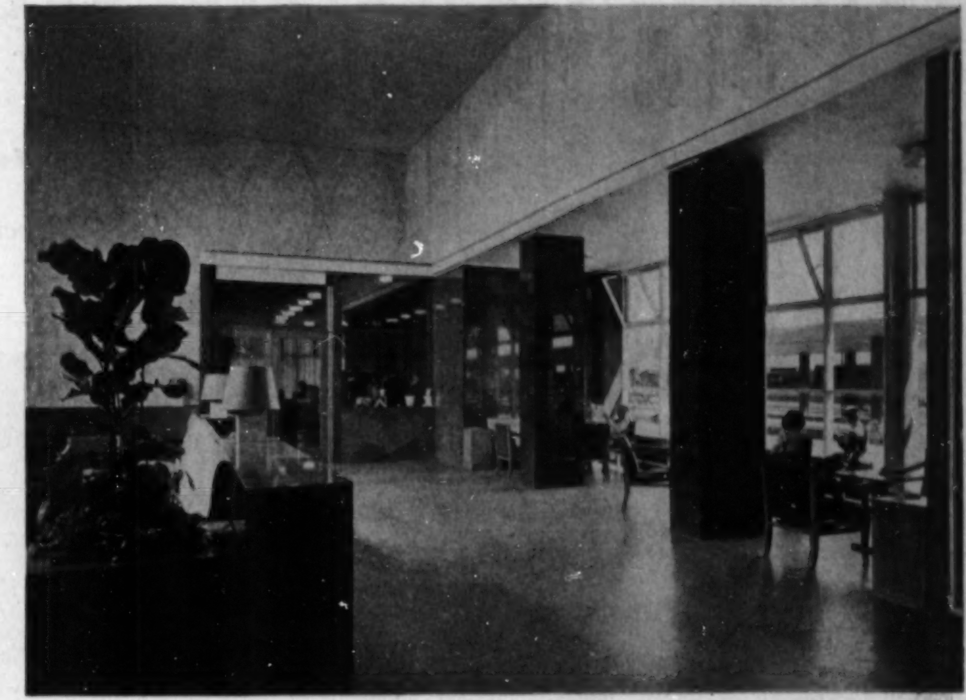


More like a hotel lobby than a railroad station, waiting room (top) has comfortable, movable furniture in gray and green upholstery. Strong contrasts are provided by black marble doorway trim, block terrazzo floors, and yellow columns

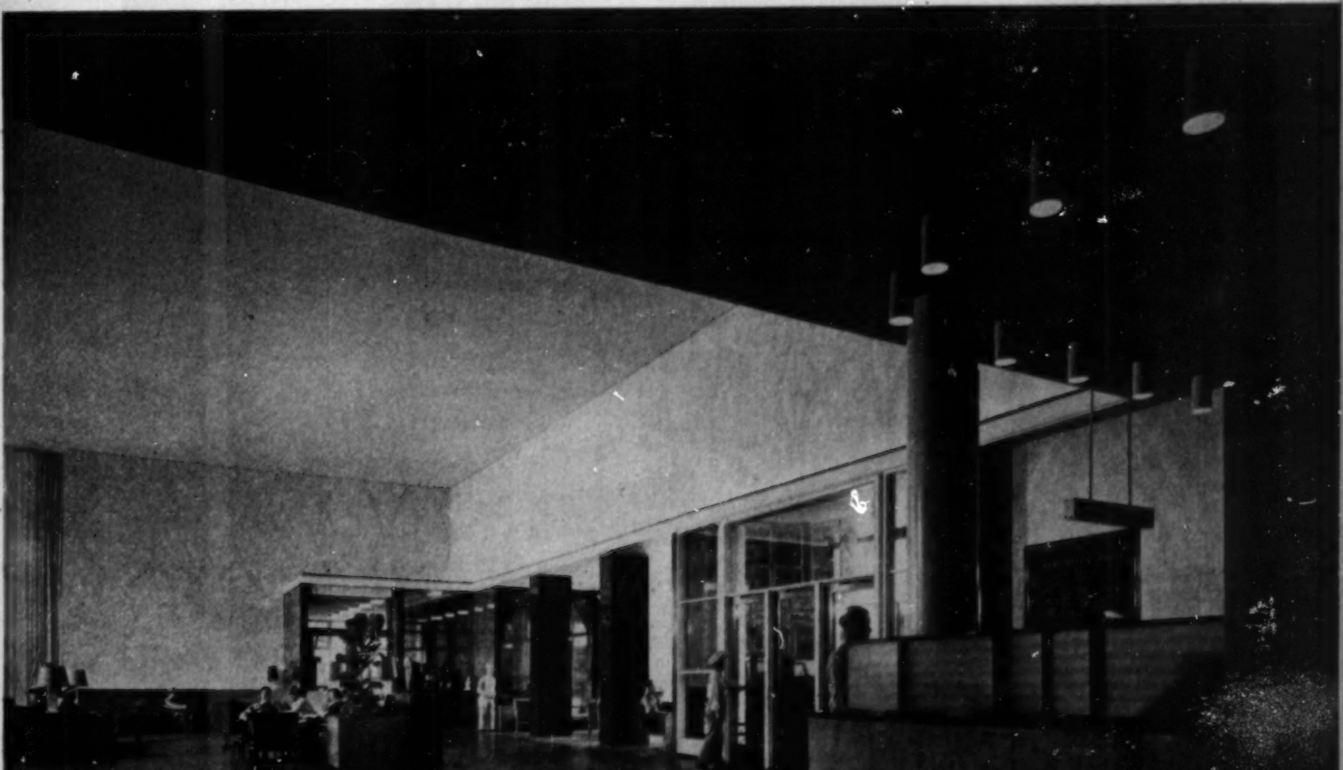
without interruption of train service, and were done in a deck design to permit maximum daylight to penetrate between canopy and train, and with long spans between supporting columns.

The interior of the station looks much more like a hotel lobby—a modern one—than a typical railroad station. Happily missing is the heavy atmosphere of older monumental stations, with massive materials and dull colors. The waiting room is lofty and light, with travertine walls, bright yellow draperies at the windows, movable, comfortable, upholstered furniture. Color tones of the furniture are deep green and gray; floor and table lamps also have green and gray shades. The table lamps have travertine bases to pick up the tones of the walls; floor lamps have wood stands to match the walnut of furniture. Black marble, framing entrance doors and accentuating alcove walls, is used to give a contrasting note.

Since the station was built under wartime materials restrictions, it was not possible to do everything desired. Provisions have been made, however, for the installation of air conditioning later. The lighting system uses equipment of conventional types; fluorescent lighting was not available. Outside the station is illuminated by lights along the side and under the entrance canopies. Including the track work, the station cost approximately $500,000.



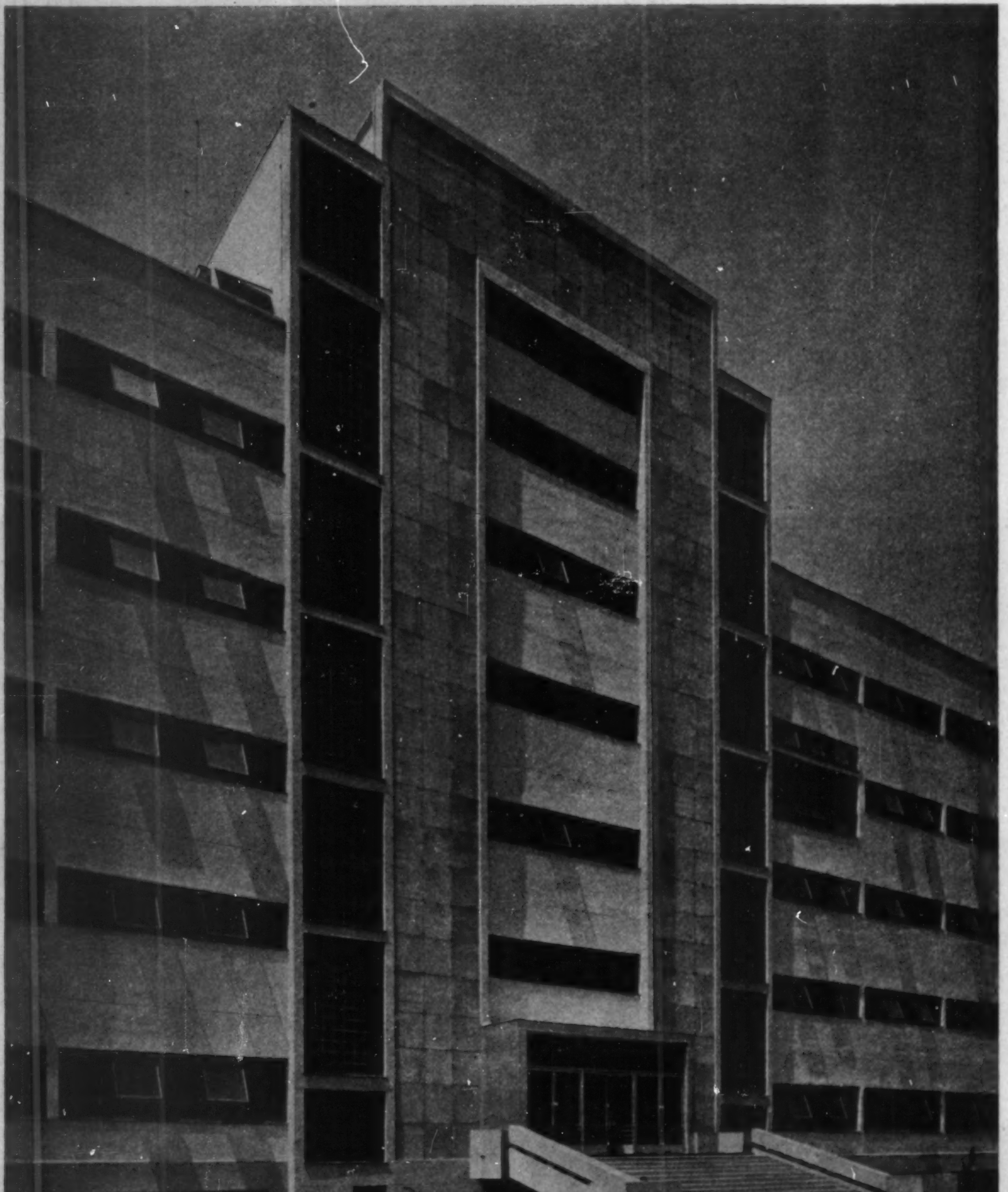
Huge window permits clear view of train tracks from alcove. Clear glass partitioning opens view into restaurant. Below: general view of same portion of the waiting room, from a point between ticket counters. Clear glass doors provide unobstructed view to train platform beyond



CHILDREN'S HOSPITAL, MEXICO CITY

First Unit of Mexico City's New Medical Center

Jose Villagran Garcia, Architect



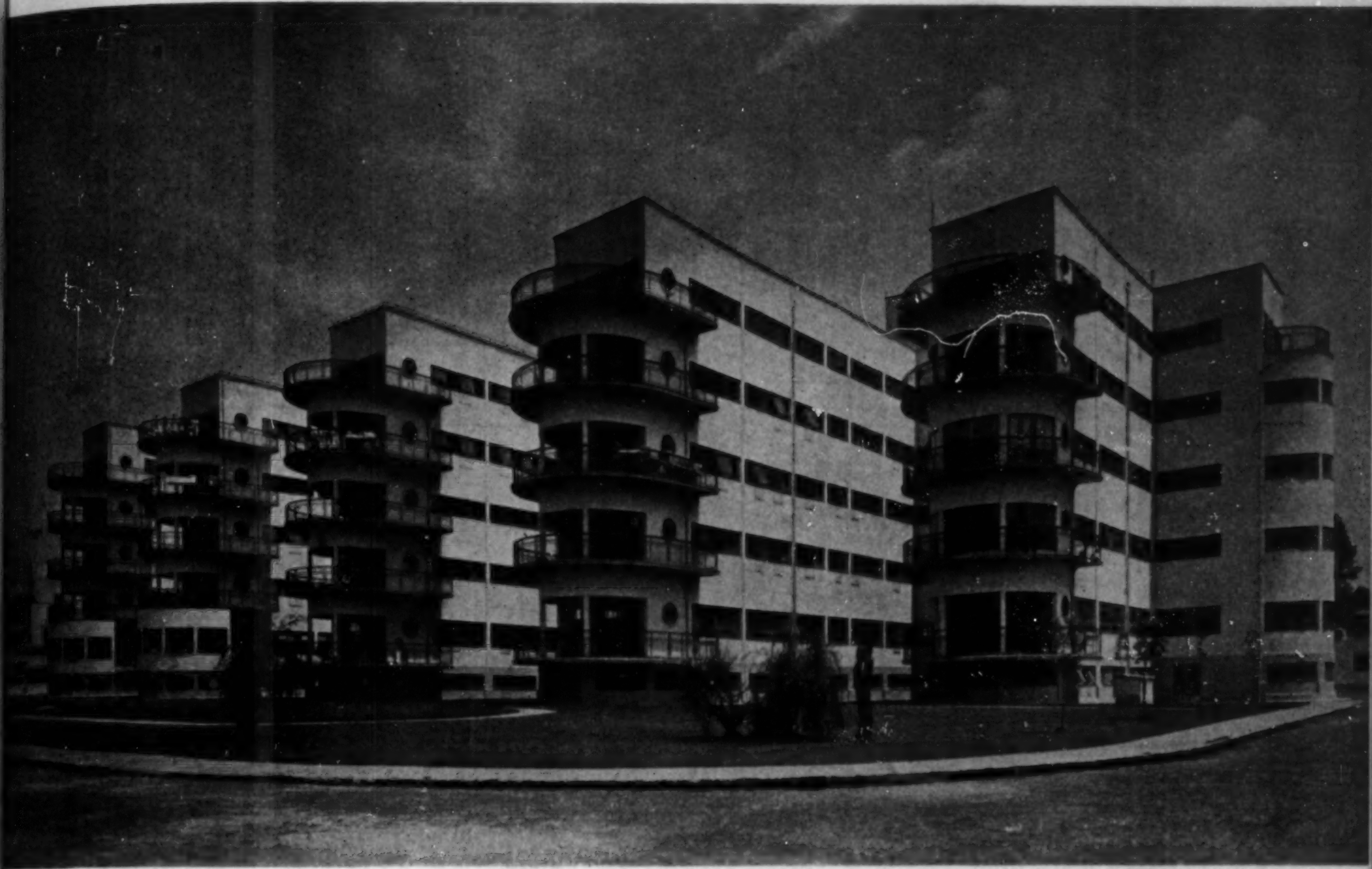
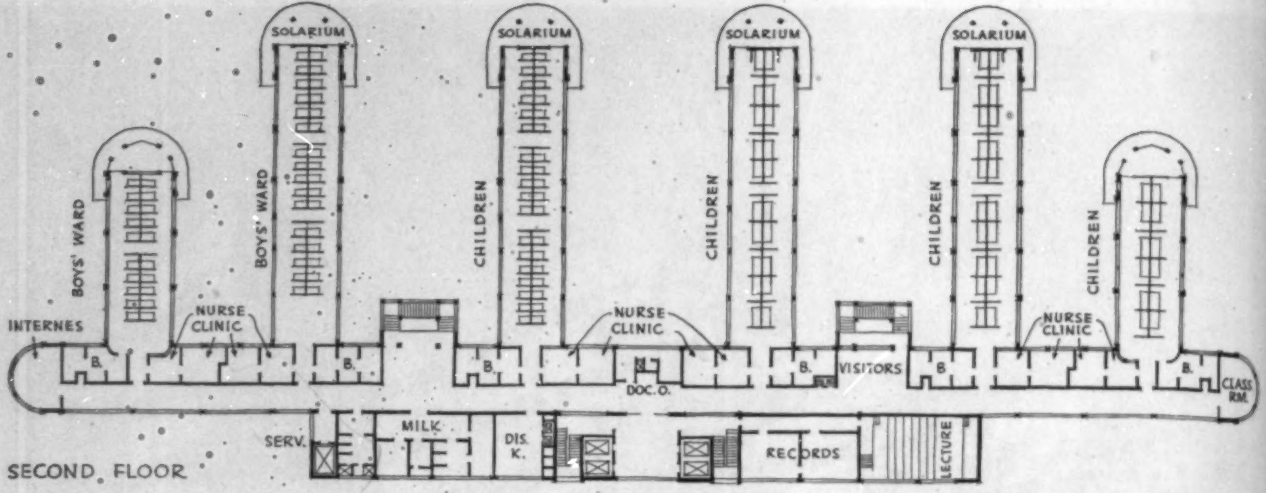


Foto Servicio Comercial photos

THIS Children's Hospital, one of twelve units which will eventually form the Medical Center of Mexico City, has beds for more than 600 children, facilities for several thousand outpatients, and in the case of an epidemic—can care for even more children. The hospital was financed not only by government subsidies but also by gifts, legacies and endowments.

Designing the building around a partial structure already existing, one which "is in continuous movement and settling," made several unusual construction features necessary. The building has a central catenary with a sag of approximately 60 cm. Because of movement and settling, free joints were used as much as possible in all construction. These joints are similar in principle to those that permit elasticity in metal frame setting, and in this case permit frame movement without breaking walls or columns. The lintels, walls and floors also have elastic faces in order to avoid cracks in the rigid and continuous sections. The last seismic movements that occurred in the floor of Mexico City proved the advantage of this scheme; defects caused by constant sinking are known, when seismic movement occurs; changes are particularly in evidence. The damage caused was almost nothing in the elastic elements; in the old rigid walls, there had been at least cracking of plaster.

Cubicles which house beds for the patients of various wards were constructed along similar principles of non-rigid construction. Apart from the elasticity in this respect, there is another advantage; an ingenious system of wedging permits mounting of partition frames as movable units, inserting one against the other, without the necessity of bolts, in order to form semi-isolated cubicles or totally isolated cubicles both for children's beds and for adults.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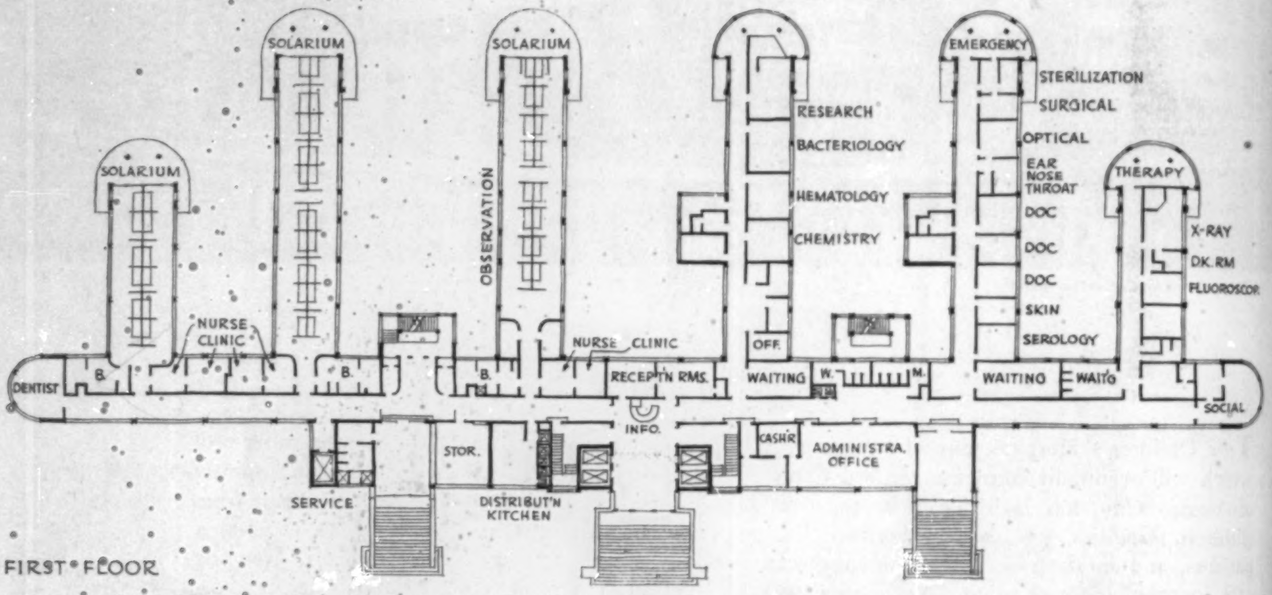
SECOND FLOOR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RECEP'TN RMS.
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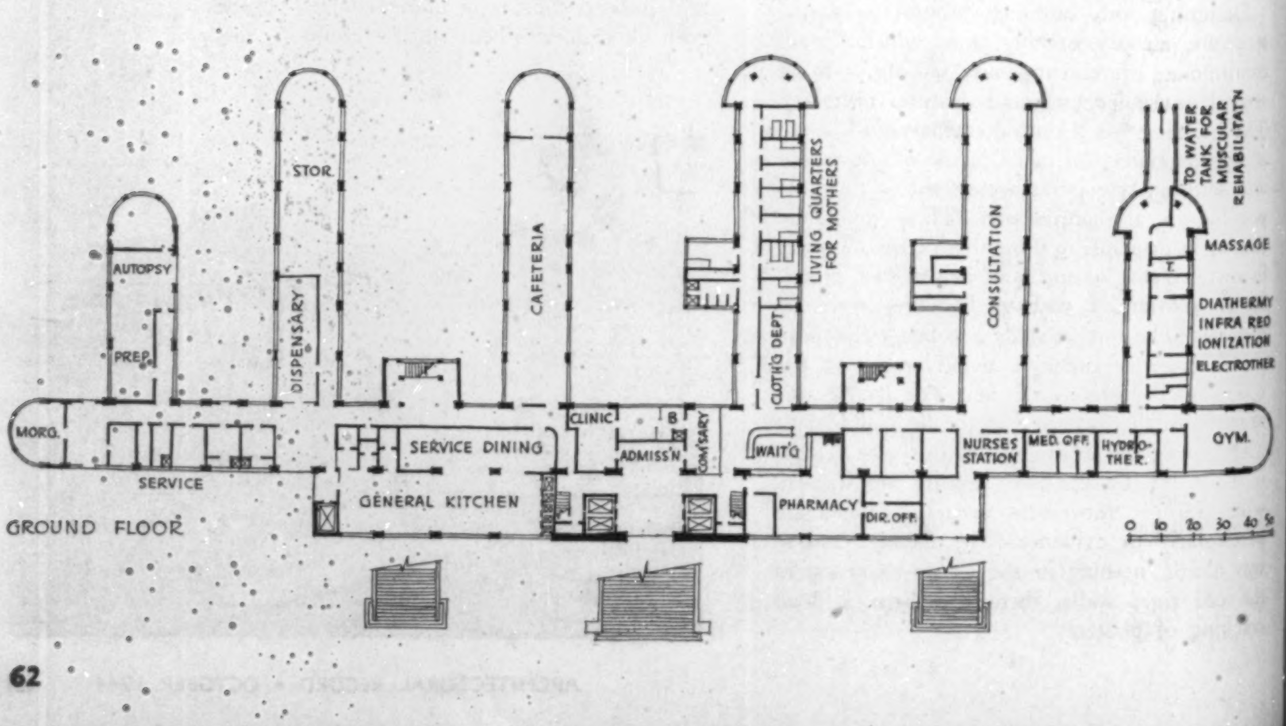
SERVICE
DISTRIBUT'N KITCHEN

FIRST FLOOR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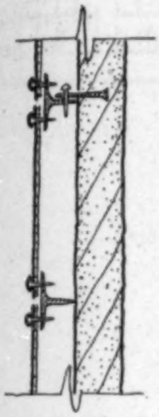
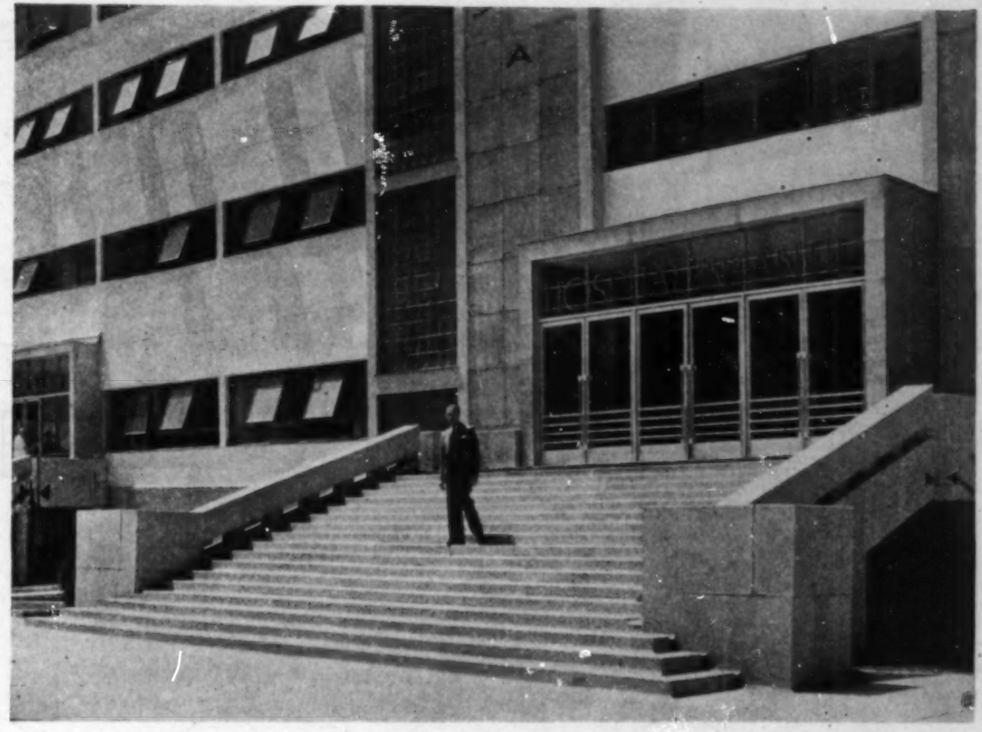
GROUND FLOOR

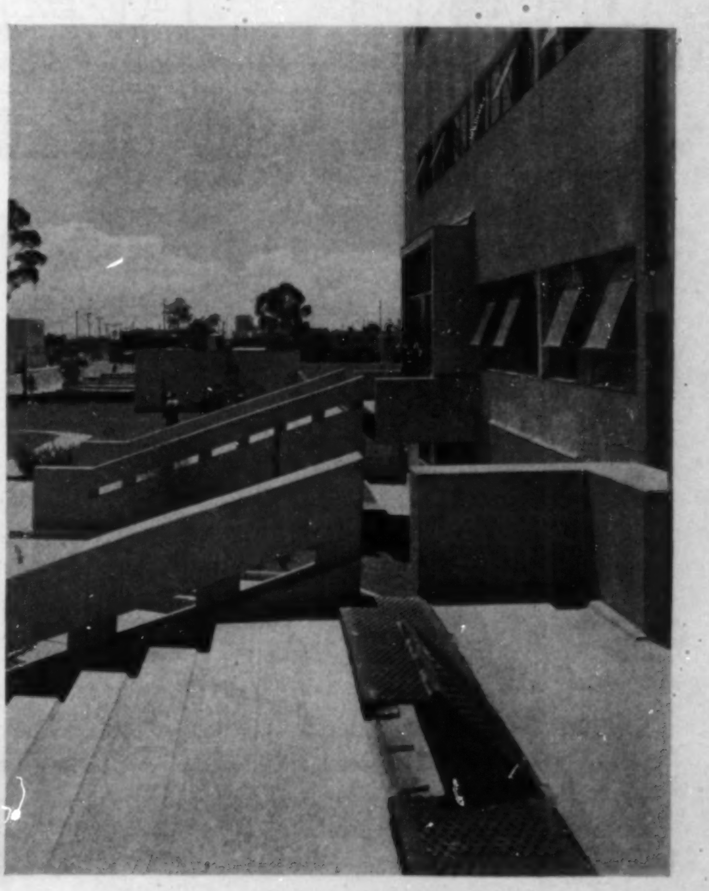


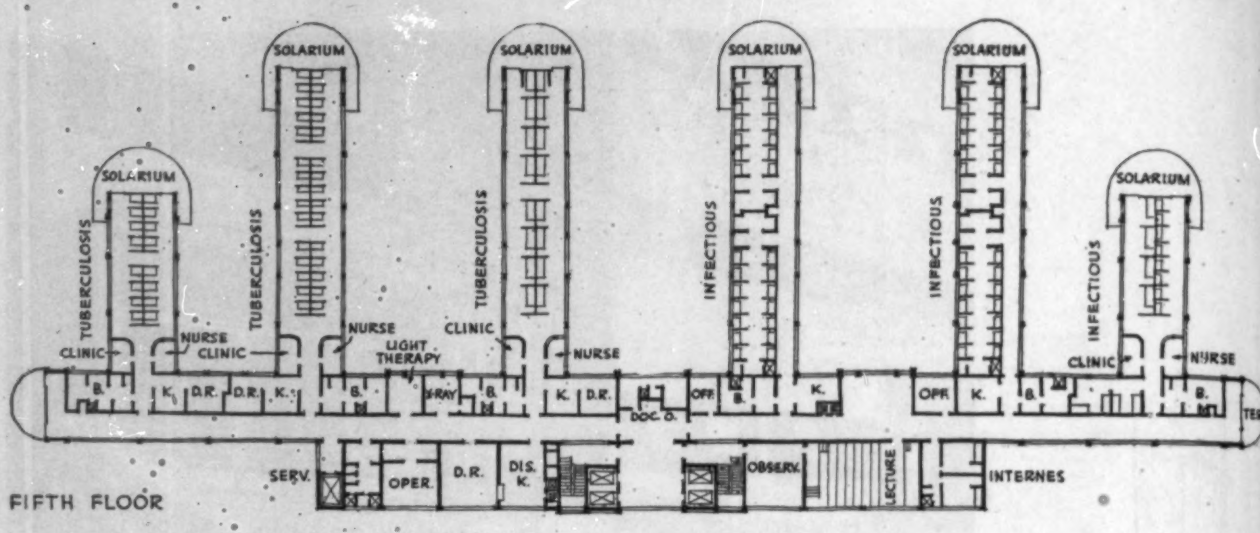


Above: Entrance stairs are not attached to the building which is settling and in continuous movement. "A" on facade refers to "free joint" detail at left; arrows show separation gap, visible in view below, where the grating has been lifted for inspection

The hospital, with each wing arranged to care for a particular disease and children of a particular age group, is so orientated in its outline that sunlight illuminates all the wards and departments. The south part of each wing opens into a solarium which is completely open for the tuberculosis wards, and is semi-enclosed for all others. This arrangement permits the children to go to the solarium in their own beds or in wheel chairs for sun and fresh air, as well as to view a large elliptical garden in which will be given exhibitions, circus puppet shows, music and group singing. The comb-like arrangement of the wards will permit the children to watch the exhibitions from the solariums without being in contact with those from any other ward.

A typical ward includes a nurses' station and all the sanitary and cleaning facilities that are needed for employees and patients. In the adjacent corridor are ducts which carry the dirty clothes to the basement, and in the appropriate spot of the same floor are the pharmacy elevator tubes that carry drugs and medical prescriptions to each floor. Conveniently distributed in each ward are wash basins for use by doctors while visiting their patients. Venetian blinds are used to control sunlight.

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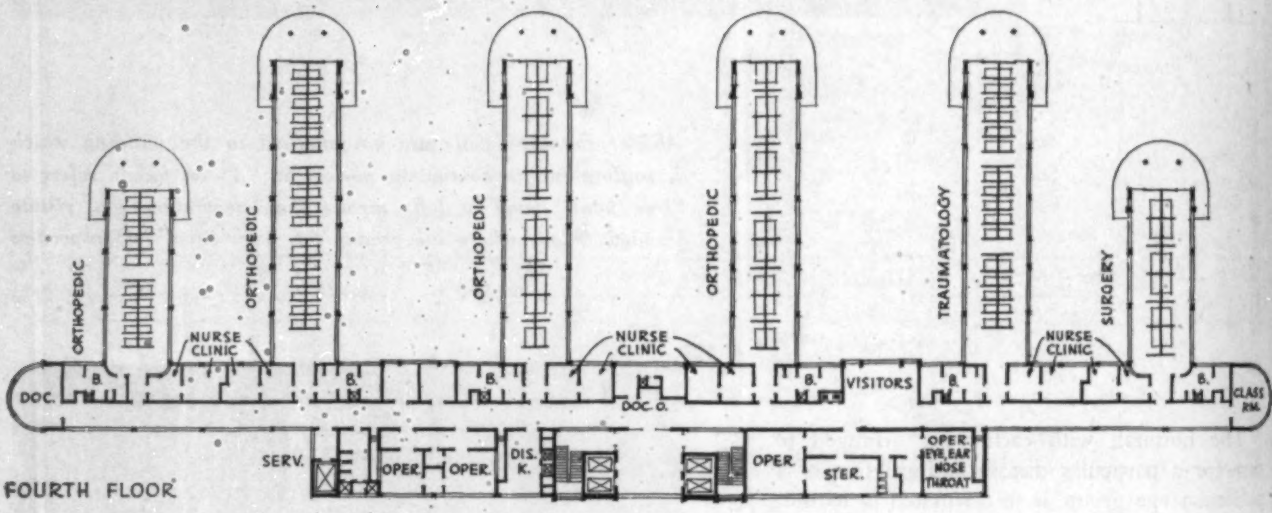
FIFTH FLOOR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TRAUMATOLOGY
SURGERY
NURSE CLINIC
NURSE CLINIC
NURSE CLINIC
DOC.
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VISITORS
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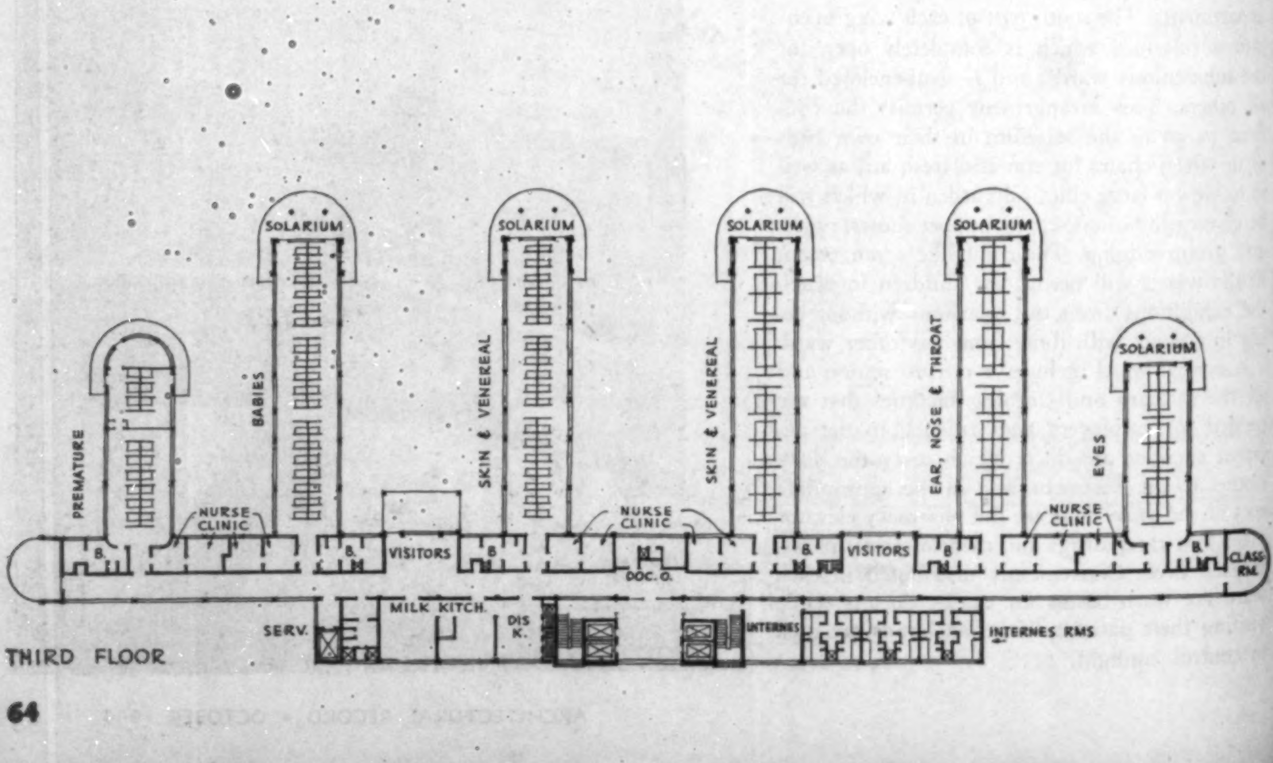
CLASS RM.
SERV.
OPER.
OPER.
DIS. K.
OPER.
STER.
OPER. EYE, EAR NOSE THROAT

FOURTH FLOOR


SOLARIUM
SOLARIUM
SOLARIUM
SOLARIUM
SOLARIUM
PREMATURE
BABIES
SKIN & VENEREAL
SKIN & VENEREAL
EAR, NOSE & THROAT
EYES
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NURSE CLINIC
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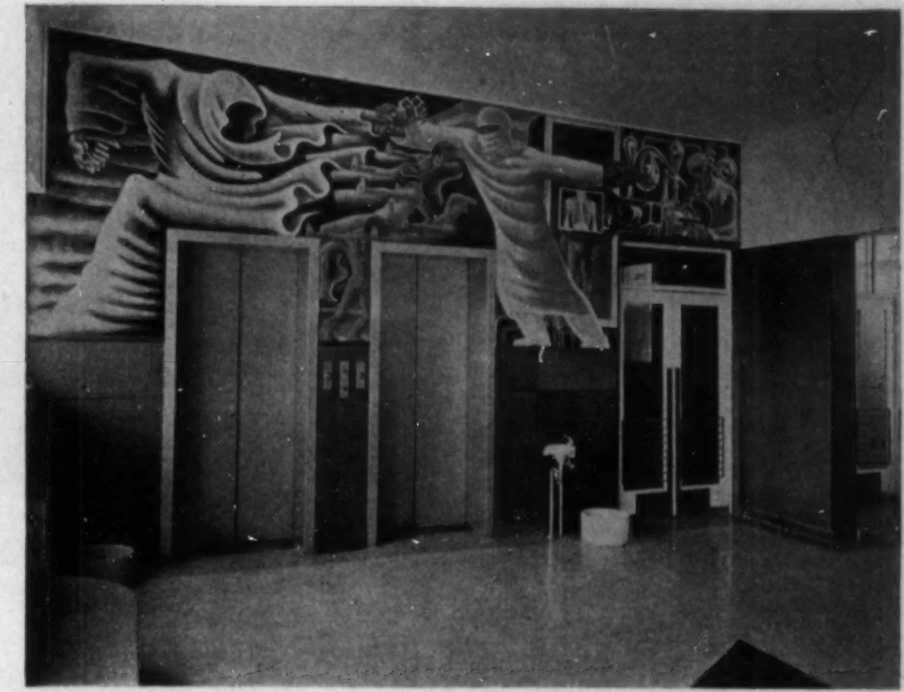
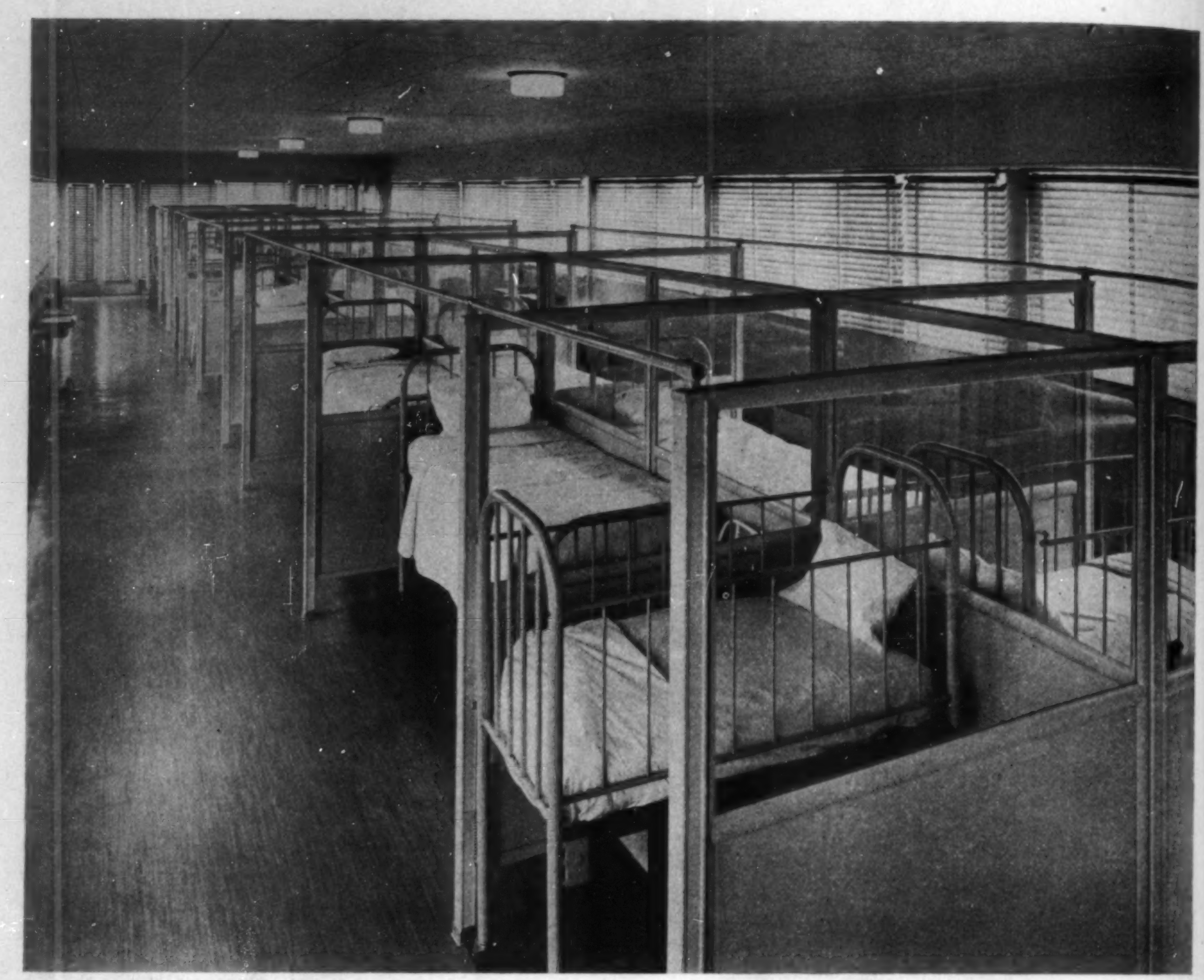
INTERNES RMS

THIRD FLOOR

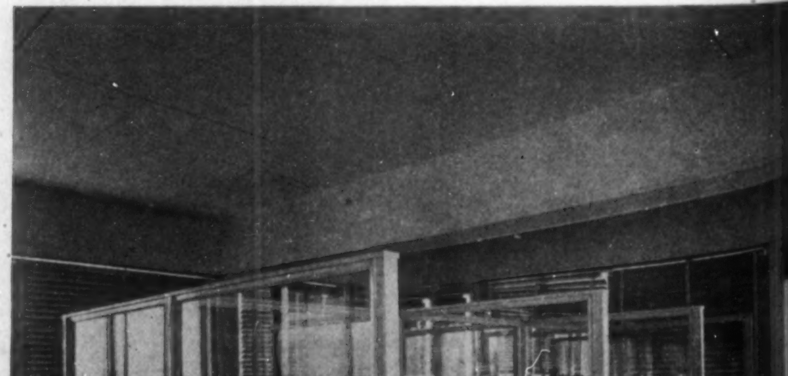


Above: Mural, "La Lucha Conta La Tuberculosis" by J. Eppens, certainly could not be criticized for its subtlety. At left: A typical view of a visitors' lounge with map used as mural. Below: The standard corridor has high windows providing borrowed light

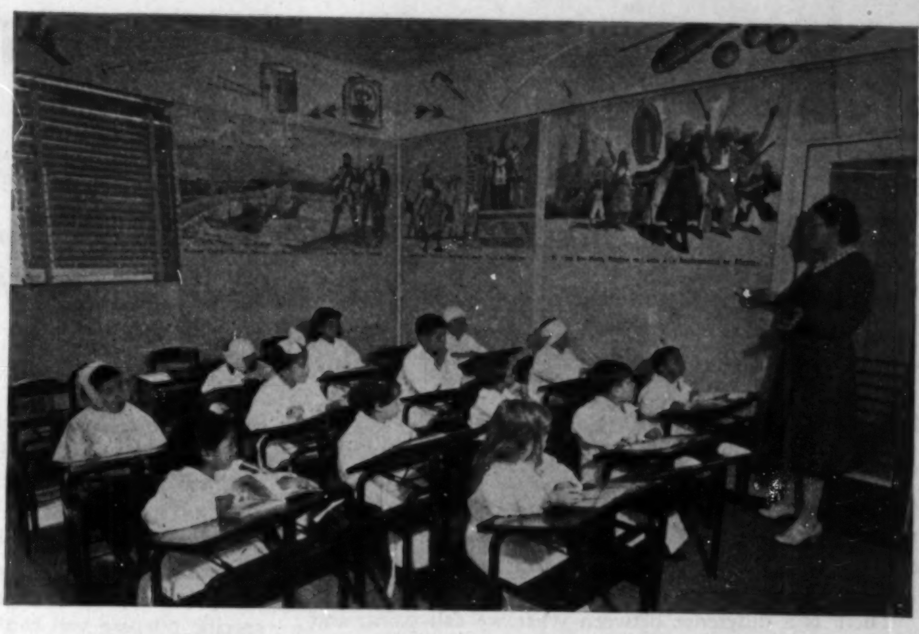


Above: Flexible arrangement of partitions permits the housing of 18 to 20 children of grammar school age, or 25 to 30 children of pre-school age in each ward. Below left: hall viewed from tubercular section. Below, right: ward for premature infants

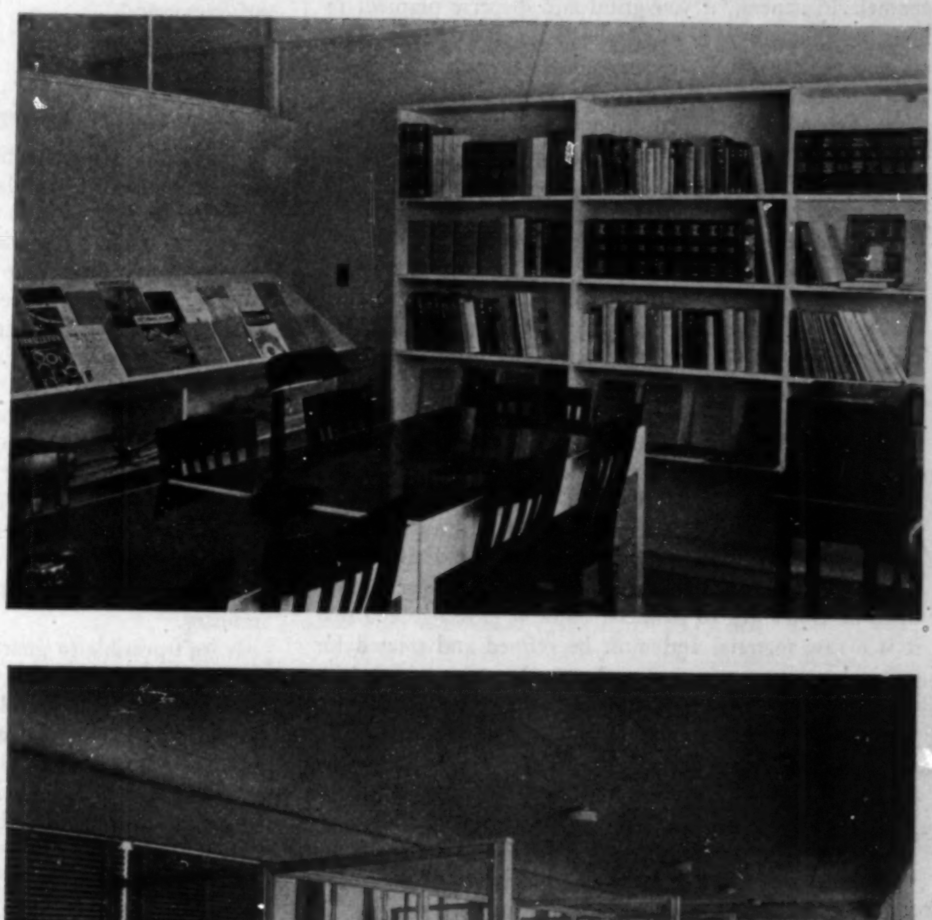
COCINA DE
PISO



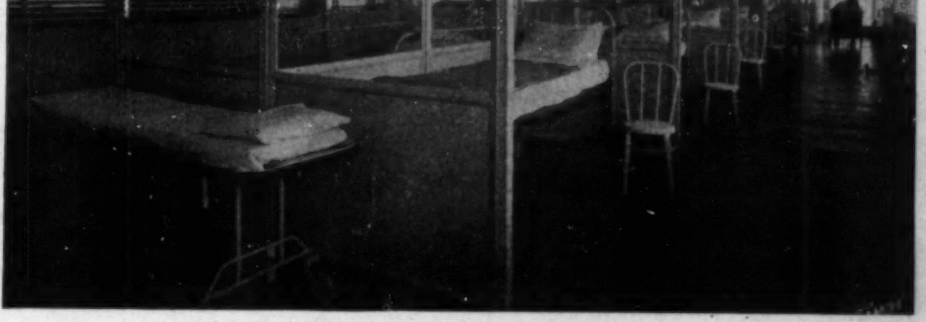
Rafael Garcia photos



Mexico's progress is evidenced in these classrooms, bearing out the determination to carry on an educational program



Reference library for internes. All doctors graduated in pediatrics from the National University attend this hospital



Wards are provided with blue venetian blinds; beds are separated by glass walls. Doors at far end lead to terrace

POSTWAR PAINT

What is new in paints? How shall paint be specified? How used? Four authorities provided these answers at an open informal "panel discussion" sponsored by the Technical Committee of the New York Chapter, A.I.A.

PROGRESS AND THE FUTURE

J. S. Long

CHEMICAL analysis and synthesis have taken the place of rule-of-thumb "mixing" in the manufacture of paints, enamels, and all applied surface-covering and protecting films.

There is a difference between what we call paint, and enamel. In general, if you grind and disperse pigment in linseed oil, you have paint; however, if instead of linseed oil, you use varnish, you have enamel. Varnish is made by cooking drying oils such as tung oil with some kind of resin. The resin can be rosin costing 3 cents a pound; or ester gum costing 9 cents; or phenolic resin costing about 15 cents a pound, and so on up. Any number of combinations of these materials is possible. Furniture manufacturers use varnishes with a high resin content, and very little oil. Floor varnishes usually contain 1/3 resin to 2/3 oil. There are thousands of different varnishes, all kinds and all prices, but a $7 varnish is just too dear for any concoction.

The early paints were earthy oxides in linseed oil. White lead has been a very popular pigment for years, as have the zinc oxides and their combinations. One large manufacturer used to use 50 per cent lead, and 50 per cent zinc, as more complicated measuring seemed to have been too difficult. Titanium dioxide[1] has become the dominant white pigment in the paint industry in the last thiry years because it has 7 2/3 times the hiding power of lead.

On the vehicle side, raw linseed oil was once looked upon as God's gift to painters. Now it is recognized that it is a raw material and must be refined and treated for particular purposes, just as crude petroleum is processed for its many uses. Tung oil varnishes have given way largely to alkyd resins[2] which are made of glycerine (or something like it), phthalic anhydride, and drying oils, combined in proportions and ways to make a tough vehicle that is resistant to ultra-violet rays and sunlight. They yellow less, and are competitive with other types of vehicles. Unfortunately it is not possible to get them during the war.

Pigment improvement has been marked; once, if you painted a house white and the shutters green, the green went out before the white. We now have light-fast blues, and therefore faithful greens; just one instance, among hundreds, of pigment progress. Polystyrene and Butadiene[3] are coming into their own. Just as the architect constructs buildings, the chemist is constructing paint molecules. Chemists have blueprints of atom formations, designed in advance, planned for a purpose. It is possible to solve specific jobs by planning. These molecule diagrams might be called space models. Two pictures of typical space models are reproduced here. From the chemist's research have come better paints and enamels for every specific purpose you can imagine, more efficient, durable, and economical.

SPECIFICATIONS AND GUARANTEES

Dr. Henry A. Gardner

IT IS difficult for an architect to specify paint by using a scientific technical formula, unless he is a trained and experienced chemist as well (God forbid!) For instance, the army and the navy specify with seven or eight printed pages on each product, so an architect stands little chance of matching them, or even using them very intelligently. There are some 600 paint specifications used by the government; they're in book form and even a skilled chemist can't always understand them. Using brand names is recommended as good specification-writing practice. The architect cannot list all manufacturers in the specification, but he can list some, and say *or equal*. This is admittedly a trial-and-error method for the architect, and his choices will be based on experience. However, it is hoped that eventually we can work out a better system of classification and grading, between the architectural profession and industry.

It isn't possible to guarantee the life of a paint, because, when it passes from the producer to the painter or user, the paint manufacturer loses control of his product, and the factors of poor surface-preparation, excess moisture or incompetent workmanship, would affect the final result. One architect asked for a guarantee (15 years) from the painter, which it was obviously impossible to give. You would need inspectors on the job constantly. All the manufacturer can give is the paint itself and the formula, an honest statement of the content. For the present, and the near future, the best advice to architects is to stick to the reputable trade brands rather than attempt to use lengthy federal specifications that might require testing laboratory procedure.

PAINTS FOR EXTERIOR APPLICATION

R. L. Hallett

THERE IS no distinct line between exterior and interior paints. It is true that some paints are satisfactory indoors and are unsuited to exterior work, but many paints made for exterior work can also be used for interiors. Generally

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[1] *Titanium Oxid is a white powder produced from the treatment of titanium ores. Its most important use is as a pigment for paint, enamel, rubber, paper, etc. It has greater hiding power and whiteness in oil, than any other known substance.*

[2] *Alkyd resin is made from fatty acids, phthalic anhydride, and glycerol. It is used also as a bonding material.*

[3] *Polystyrene is a valuable synthetic resin, and Butadiene is the principal factor in the manufacture of synthetic rubber.*

THE PANEL (from left to right) Henry Gardner, *Director, Scientific Section, National Paint, Varnish & Lacquer Association, Inc;* R. L. Hallett, *Chief Chemist, National Lead Company;* J. S. Long, *Chemical Director, Devoe & Raynolds Company, Inc.;* John Marshall, *Chemical Director, Finishes Division, E. I. du Pont de Nemours & Co., Inc.*

speaking, there are two schools of practice. The first school is based on the use of paint made with pure white lead, the oldest and still a standard white pigment, with the paint tinted to any desired color or shade. The white lead pigment may be used in the form of paste with the pigment ground in linseed oil and the paste thinned on the job by the painter for particular costs, climates and exposures, or the white lead paint may be obtained in prepared form, ready for use. The second school uses ready to apply mixed pigment paints, in which several pigments are used together for desirable characteristics. There are advantages claimed by both schools: the first capitalizes the knowledge and experience of the painter, using paints mixed specially for each job; the second is "satisfactory" if the paints are properly selected for each particular use.

The modern synthetic resins and treated oils are used in many exterior paints, and the white lead of today is much improved and much stronger than white lead of ten or fifteen years ago. In preparing white lead paint the painter takes the white lead paste and usually adds linseed oil, volatile thinner and drier for regular paints, or some of the newer vehicles for special finishes. Usually 100 pounds of paste white lead (3 gallons) contains 1¼ gallons of oil and the painter adds another 3 gallons of oil.

The mixed pigment paints are made with utmost care and the best materials, and the introduction of titanium oxide has given them superior hiding power. In the purchase of paint and paint materials the manufacturer's reputation and integrity are worth more than almost any other consideration.

For exterior work it might seem that a hard glossy paint would be ideal, but this is not entirely true. If a building were covered with vitrified impervious tile, you would still get an unsightly building in time, as the rain would not remove the dirt. The building surface with the best appearance is one that slowly undergoes surface changes, with slight chalking. The slowly chalking surface sheds the dirt and maintains a good surface appearance. Chalking also reduces the thickness of the paint before repainting is required, which is important as many coats of paint piled on year after year eventually tend to cause cracking and other surface defects.

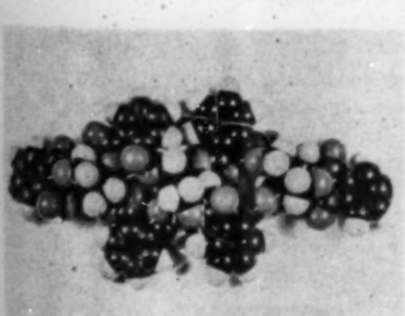
INTERIOR FINISHES

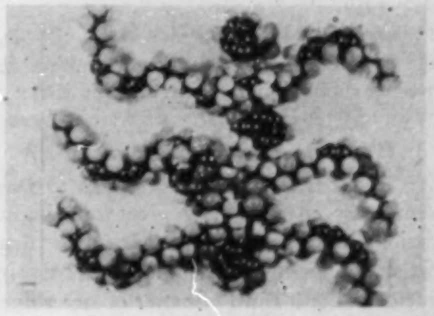
John Marshall

The usual interior paints are: flats for walls, enamels for walls and woodwork, and varnishes for floors. When you foresee a change of tenants in a building, apartment, or room, every three months or so, you frequently use the cheapest paint you can find—anything to hide the dirt. An alternative would be to choose a washable, scrubbable paint. It would be interesting to get a comparison of costs, labor, material and time. But for work that is to have considerable length of life a good paint is an economy, and you get just about what you pay for in paint as in anything else, if you know the name on the label.

In the flat wall paint field we have something relatively new—the emulsion flats. These products have excellent hiding power, reasonably good washability, easy application; they are water thinnable, and have good life on plaster walls. The average journeyman painter doesn't know this material thoroughly yet, may not have had much experience with it, and may be skeptical if not hostile to it. Probably in time he will be better able to judge it. He may learn to like it, otherwise it will continue as a household handyman's type of paint product.

The enamel field is somewhat like the wall paint field, but here, too, we need a comparison of cost between the cheap paints, and the more expensive but washable coatings when used for maintenance of apartments. In the case of enamels and flat wall paints, as you push the price down, you get further away from durability, washability and flexibility. It's all a matter of price, and quality usually varies directly with the price. The price of labor of appli-





Models showing molecular or chemical structure of paints are made up of colored spheres and other shapes to form the patterns cation is the same for a cheap as for a good paint, so in the long run the good paint is really the most economical as less frequent painting will be required.

PAINT QUESTIONS AND ANSWERS

Specifications

Q: *What about specifying by brand name when you are not familiar with a particular brand?*

A: You must test if you don't know, or ask a colleague who has used it or tested it. Consult your painter, see what his experience with it has been. The manufacturer should demonstrate the qualities and advantages of his paint in tests and be able to supply you with the authoritative evidence.

Q: *What about the architects and manufacturers getting together on standards since the field is changing so rapidly?*

A: It is changing; there are from five to six thousand new materials coming in each year. They become obsolete so rapidly that there's nothing to do but specify trade brands now. It would be difficult to set up standards that would have real meaning for any length of time.

Q: *Does the National Paint and Varnish Association recommend paints or specify for the architect?*

A: No. We do research into materials, do not make comparative judgments.

Q: *How can every paint contractor try out each paint? And, isn't it wrong to specify one manufacturer?*

A: The painters can't. But they do know some good brands from personal experience, and the reliability of manufacturers, too. You can specify four or five manufacturers. There may be objections, but you can stand your ground on the basis of your experience and responsibility.

A: The architect is in the position shared by the automobile industry. Automobile men test paint products carefully, mostly by seeing panel tests over a period of years. Then they make up their standards. They may have a second source of supply, and we may make up new materials as alternates, but we have to prove them by test. The war has degraded some finishes, not all. We can't get alkyds, so will have to wait till postwar for them. A company only changes its formula to improve its position, and always to the advantage of the public. A better product makes for more business for the manufacturer.

Q: *How do you specify a varnish for a floor, one that won't require waxing or refinishing?*

A: Since a varnish film is only one or two mills thick, it is asking too much to expect it to wear indefinitely. The new penetrating floor varnishes, however, give excellent results. These varnishes are low in viscosity, and soak into the wood, and the wood itself takes most of the wear.

Q: *In the light of recent technological developments, do you think it necessary to specify a pumice rub for fine finish on interior woodwork?*

A: I see no necessity for it. A high-grade eggshell enamel makes rubbing unnecessary. This is not true of floor varnishes as yet but it's true of wall and trim finishes.

Q: *What about brush marks and dust?*

A: That's true, you will get them to a certain extent, but semi-gloss enamels now give you almost perfection. Occasionally the "carriage trade" may demand a hand-rubbed finish. A hand-rubbed finish is never significantly better, incidentally; it's just a matter of super-fine appearance. But you have to pay a high labor cost for such perfection.

A: Fifteen per cent to 20 per cent goes for material, 80 per cent to 85 per cent for labor in a painting job. If you pay more for the paint it's lost in the shuffle, or should I say, "a mere drop in the bucket?" A little saving makes for a lot of deterioration and upkeep.

A: You can make two spar varnish enamels, same ratio of pigment to binder, same flexibility, with a 400 sq. ft. to the gallon spread in one and 250 sq. ft. to the other. They look the same, but one costs a lot because the small spread adds to labor of applying it. The lower spreading rate (cheaper) costs a lot more in labor, but gives a more lasting result.

Q: *If cost were no object, what would you recommend for semi-gloss on interior woodwork?*

A: An alkyd resin with a titanium pigment. An elastic film with a maximum hiding power (expressed in units of hiding power per gallon).

A: And made by a reliable manufacturer.

Q: *Many of us work on institutional buildings, on all kinds of old and new jobs. Will the manufacturers give us direction, or will we be painting at our own risk, if we have to paint early?*

A: Do let your buildings dry out! Permit your jobs to breathe water. They must breathe tons of it. It can't dry too well in *four days*. If you have to speed up, give it all the breaks you can. Manufacturers will issue rules and data for your guidance. But let the water out, otherwise it will take the paint with it when it goes. The individual company (through its laboratory, usually) will issue information.

Q: *What about fire susceptibility? Lacquers especially. I have heard of blue flames running along the ceiling. What about smoke, a panic hazard?*

A: The fire-retarding qualities depend upon having a minimum of organic material. So use a flat paint with a minimum of resin, oil, or any other combustible. As for fumes and gases, it's the same thing, a minimum of combustible ingredients.

A: The dried films of pigmented nitro cellulose lacquers have about the same inflammability as enamels and paints of other types. The inflammability is about equal to that of wood. Of course, no finish is as fire resistant as a metal.

Application and Finishing

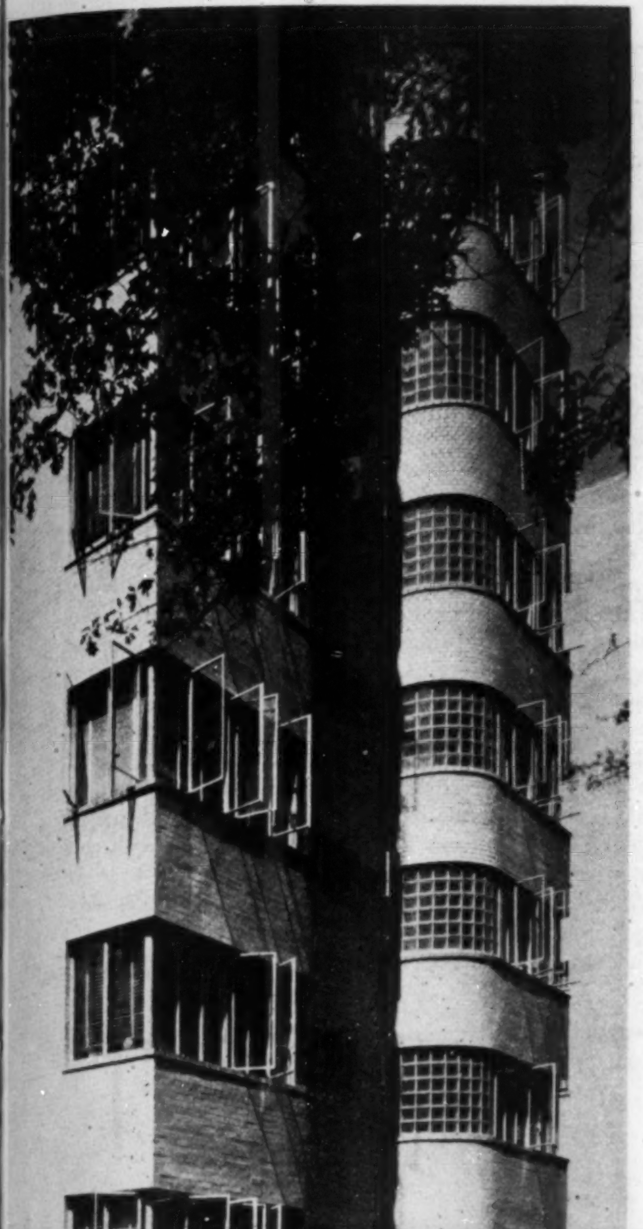
Q: *Can you give us a simple statement on what paints should* not *be used on others?*

A: If you have several coats of *soft* paint on the wall, don't repaint with normal varnish base paint. Ochers are soft: a hard paint over them will "alligator." Lead chromates are very soft. If you can scratch it easily, don't put a hard paint over it. Oil paints should not be used over three or more coats of a casein paint. Otherwise, use any paint on any paint.

A: Poor adhesion is something obtained when very hard old enamels are recoated. For example, the Old Dutch enamels got very bad as their films aged. Sanding will help, but won't entirely prevent flaking. A solvent treatment is sometimes needed.

A: I agree with the first answer. But seldom do you find soft paints. Incompatibility is very rare. Any good paint can go over another good paint. It is rare for a new paint to let loose or "alligator."

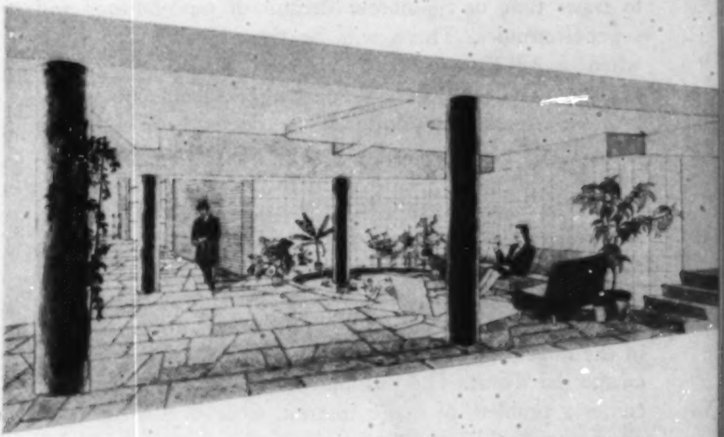
(Continued on page 134)



Berla and Abel, Architects

APARTMENTS

Nice as it would be to give every G.I. a house and lot along with a job and a Ford, everybody knows that apartments for rental are an immediate need. Indeed many a G.I. will not soon be ready for a house in the suburbs. The postwar activity in apartments is proved in Dodge statistics on V-Day projects, and in plans actually being filed. New York and Washington seem to be leaders in postwar planning of apartment buildings; Washington still in its building "boom." It is a little early yet to see clearly the apartment building of the future, but not too early to see that basic planning problems, both of plan and materials, will be the familiar ones that architects studied in times past. It is perhaps early for the speculative builder of apartments to be on the scene, but certainly not too early for an investor to be getting plans in readiness for an active market ahead.



PLANNING FOR MAXIMUM INCOME
By Benjamin Moscowitz

Diplomat Apartments, Washington, D. C.
Joseph H. Abel, Architect

Prince George Apartments, Hyattsville, Md.
Joseph H. Abel, Architect

"The Netherlands", Washington, D. C.
A. R. Clas; Maginnis & Walsh, Architects

Berhampore Flats, Wellington, New Zealand
New Zealand Department of Housing Construction

PLANNING FOR LOWER MAINTENANCE
By Lewis Mauger

Carteret Village, Orange, N. J.
Kenneth W. Dalzell, Architect

Apartment House in Sao Paulo, Brazil
Gregori Warchavchik, Architect

519 East 86th Street, New York
Arthur Weiser, Architect

Landfair Apartments, West Los Angeles, Cal.
Richard J. Neutra, Architect

The Winchester-Tewksbury, Washington, D. C.
Berla and Abel, Architects

PLANNING FOR MAXIMUM INCOME

By Benjamin Moscowitz

DeYoung, Moscowitz and Rosenberg, Architects

After the long hiatus, architects are again designing apartment buildings. If this new activity is welcome in architects' offices, it will also be welcomed by harassed would-be tenants who are now hounding rental offices looking for anything available for rent. Also by owners eager to supply the market.

From the standpoint of design it is fitting to inquire into the possibilities ahead. Are we to expect radical differences in the demands of clients, or of prospective tenants? Will everything be different in the postwar world, or will we be starting about where we were before? What are the factors that will combine to delineate the new buildings?

It would be pointless to be anything but fully realistic, to waste time on glamorous dreams of push-buttons and super-electronics. There will be time enough for them when more basic plans have been drawn, when, for example, we shall have developed a scheme that will promise a reasonable solution of the demands of high land costs, taxes, restrictions, and the demands of tenants and owners.

In New York there has been a rush to file plans for apartment buildings (and others) with the building department. The Planning Commission is proposing a revision of the zoning regulations which would restrict permissible land coverage for new buildings, and plans are being filed in the hope, however thin, that those filed in advance will escape the threat. The possibility of reduced coverage becomes a problem of major interest, since it is basic in all apartment building problems. It is the starting point for any discussion of the apartment of the future.

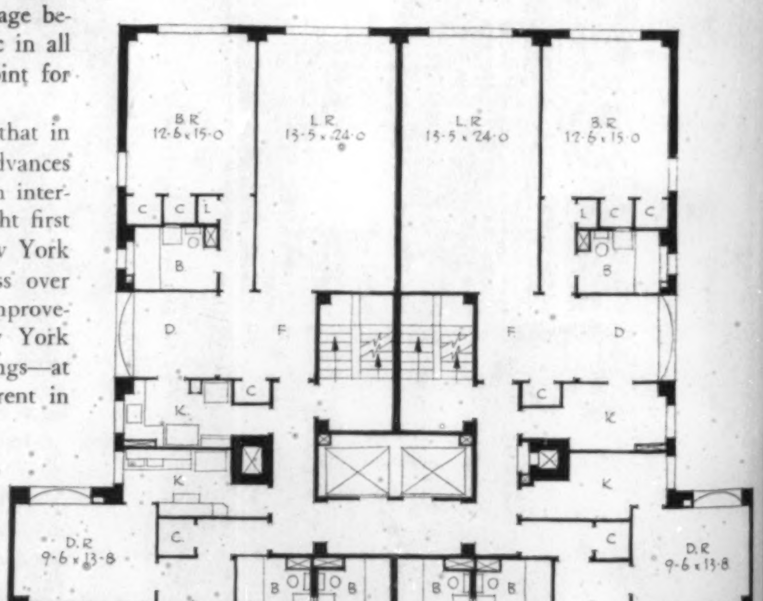
I am told, by one who has seen some of them, that in general the plans filed show almost no noticeable advances over those of, say, the late Twenties. That seems an interesting fact, but it may not be as significant as might first appear. Certainly it would be disappointing if New York apartments of the Forties could show no progress over those of twenty years ago. I think there will be improvements. Nevertheless the present situation in New York may be accepted as evidence that the new buildings—at least in the large city—will not be radically different in basic investment factors.

This will be disappointing to city planners who have urged lower population densities, reduced land coverage, further decentralization and so on. It might even lead to further damnation of the callous capitalist who seeks to build new "slums" for his own profit. Perhaps what is significant in it all is simply the picture it gives of the tremendous task that awaits one who would bring suburban living into the heart of the city.

Take the New York zoning situation again. The proposed revision by the Planning Commission by a simple regulation would cut coverage allowances. But it is not as easy as that; it has been pointed out that such restrictions would have the effect of penalizing the new building, giving advantage to the owner of an old building, and thus tending to perpetuate all the evils that new building might alleviate. The A.I.A. has urged that the situation requires a thorough review of zoning in relation to city planning, and a new city plan based on constructive aims.

Everybody would like to see better living conditions in the large city, but obviously penalizing the new crop of buildings alone is too negative an approach. Parkchester, Tudor City, Stuyvesant Town, can cut land coverages, and can rearrange the complicated city pattern, but even in such developments there is the necessity of meeting economic conditions by building high in the air.

Investment building of that type is probably the

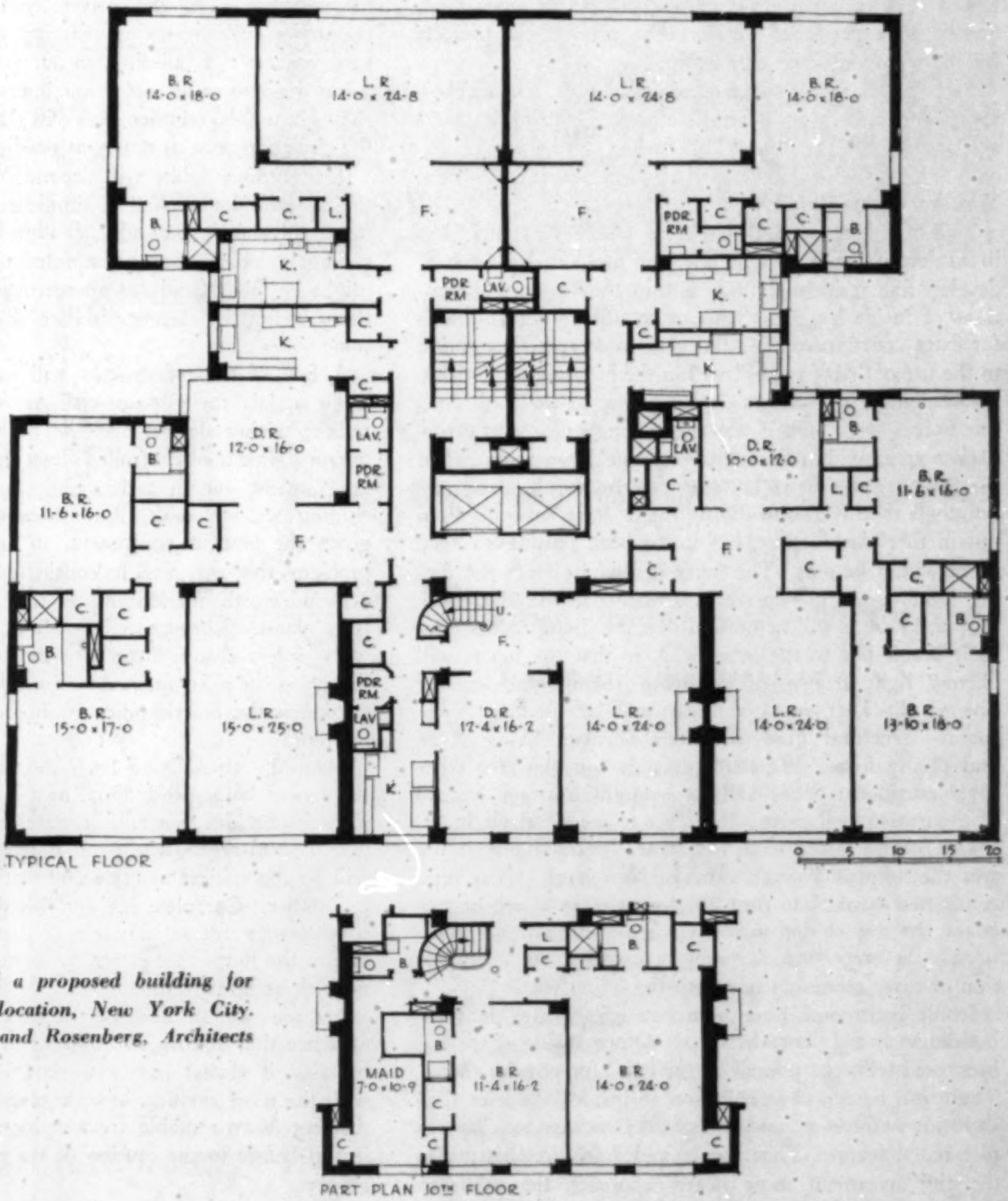


Typical floor plan of a proposed building for a West 54th Street location, New York City. DeYoung, Moscowitz and Rosenberg, Architects eventual answer to better living in the city, but recent arguments about Stuyvesant Town plans are ample evidence that densities are still too high to satisfy ideals.

At any rate, the immediate fact is that investment considerations are still the biggest problem in apartment design. The plans now being filed speak loudly in this respect. If they show few notable advances, investment considerations are the answer. Part of my assignment in this article was to discuss the differences in designing for a speculative and an investment owner. There are differences, to be sure, differences in plan and equipment and materials, but I have sought to show that they are essentially minor differences in relation to the basic problem of earning income in a city of high density and high land costs.

There is no doubt that the hope of speculative profit is a major motivating factor in the building of many apartment buildings, as indeed in most types of rental buildings. But in the end it is the rentability of the building and its possible rental income that determines the profit, either through sale or investment, so that differences between speculative and investment buildings are not great. The investment builder cannot forget the possibility that he might want to sell; the speculator, that he might be forced to keep the building. It is particularly true in a city like New York, at least in any normal competitive market. In so large a market there is a tendency for rental matters to take natural levels, to standardize within certain neighborhoods and price classes. Whether he builds for investment or speculation, the owner tends to trust market facts rather than unusual theories. Each tries to improve on his competitor's product, as in every other business, but in case of argument he prefers to stay with the normal rather than depart from it.

Thus the design problem sorts itself out fairly quickly, settling into a pattern determined by market considerations. In a certain neighborhood the market calls for apartments of fairly specific sizes. Expected per-room rentals give a guide to room sizes and general requirements for facilities—number of bathrooms, for a single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D.R. 12-0 x 16-0
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D.R. 12-4 x 16-2
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TYPICAL FLOOR

PART PLAN 10TH FLOOR

Typical floor plan of a proposed building for an East 71st Street location, New York City. DeYoung, Moscowitz and Rosenberg, Architects example. The major outlines of the pattern are quickly seen, at least by the experienced eye, and from there on the architect sets out to be as clever as he can with plan arrangements, materials and equipment features, and style considerations to make his building as attractive as possible to tenants. It is not to be inferred that these things are not important, or that the architect does not have plenty of scope for all of the cleverness and salesmanship he can command. He is forever trying to sell his client on advanced thinking, on new features of design; this is merely a warning that he does not ordinarily make much progress when he tries to include excessive court areas or expensive air conditioning systems, when these represent too radical a departure from normal procedures. He must be able to prove a dollars and cents competitive advantage to gain his point, and he must not expect to revolutionize his clients or his market overnight. It is an evolutionary process, today as yesterday.

From that background it might be interesting to check two specific buildings our office is planning for postwar construction, to see more definitely what may be expected in the earlier buildings after the war. It might be mentioned that the two in question are for an investment owner, an experienced builder who plans these projects for his own continued ownership.

Both buildings are in areas of fairly high rent levels—say $600 per room per year. One has a 75-ft. inside frontage on 54th St., the other a 100-ft. lot, also an inside one, on 71st St. They are both fairly typical problems in New York apartment design.

Both represent virtually full development of their lots in conformity with present law; the problem has been to develop fine residential units within the exposure limitations of inside lots, and without sacrificing rentable area for extra court space. We did give some special attention to the use of "dark spaces" within the building and within the individual apartments. When many of the Park Avenue houses were built it was the general practice to throw darker areas within the units into one large room called the dining room, or to lay out great foyers. In these two buildings the foyers and dining rooms have naturally been put in the "dark" space, but it has been possible to keep them within bounds. The foyer is separate from the dining room except in two rear apartments in the 71st building; and here it will be noticed that the living rooms have their broad side to the outer wall, so that the foyers will borrow light from shallow living rooms. Incidentally, one of the later material ideas will be used for these rooms—structural glass partitions between living room and dining foyer. We shall probably use glass for other foyer partitions; occasionally a wrought iron rail instead of a partition will permit the foyer to receive daylight.

One of the older ideas we were delighted *not* to use was the dropped living room. In New York it was once considered "smart" to drop the living room a step or two below the rest of the unit, but it was definitely not functional—the steps and the iron rail spoiled any combination of foyer or dining bay with the living room.

Inside bathrooms have been extensively used in these buildings to free outside space. Other inside space has been used with exceptional effectiveness for powder rooms. There can be no more objection to inside lavatories than to inside bathrooms, and the powder rooms make a very nice rental feature. They are an added feature that makes the city apartment more nearly approach the suburban home; they also improve the arrangement of bathrooms, particularly where, as in these buildings, there is a bath for every bedroom. None of the regular bathrooms need open for general guest use; each can open only into the bedroom it serves. This greatly improves the layout of at least one bedroom in each apartment, and it is never necessary to use the awkward device of two doors to one bath.

Perhaps the one feature of these apartments which tenants will most appreciate is the closet space. Inside space is always more useful in closets than in foyer or dining room, and no family ever seems to have quite enough space for storage. If, as is promised, the postwar world will include more and more possessions for everybody, designers can give serious thought to this ever-present problem of living. Sometimes it is argued that those who could pay $600 a room can afford to discard old things that the poorer family would keep; it could be countered that they have more possessions in current use.

Another age-old problem, especially in city dwellings, is better daylight. We originally drew these plans for conventional window areas (perhaps just from habit); but that was one of the early revisions. Surely there is no reason for building useless masonry piers in the large steel and concrete city building, so our good frontages will develop window areas to the maximum. It might be added that this will be another device in the objective of making the city apartment as nearly as possible a "house by itself."

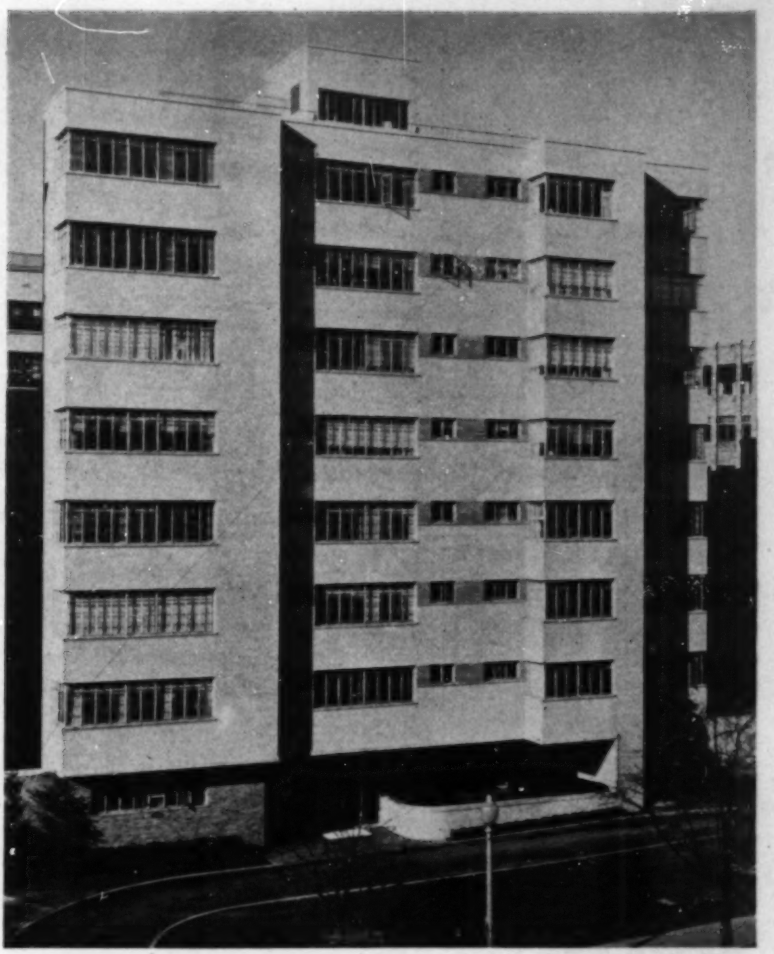
The entrance lobby will depend for its effectiveness on the use of color applied to simple wall surfaces, with the more advanced methods of illumination. Incidentally, styling in lobbies may be expected to show advances that might be too radical for apartment interiors, with something definitely cleaner, fresher than in the lobbies of some years ago.

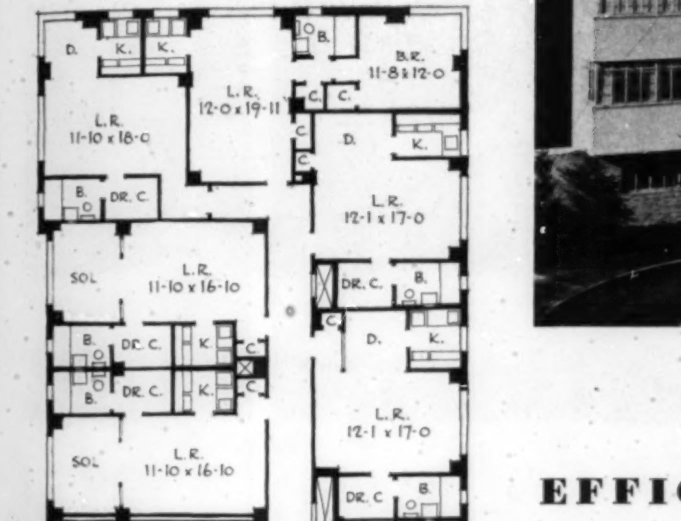
A few of the refinements will include such items as: radio aerials for FM as well as for AM (or regular) radios; wiring devices such as built-in medicine cabinet mirror lights, door-controlled closet lights, switch-controlled base outlets, one in each room. Roofs are insulated, including setback roofs. Laundries and kitchens will be given the best of equipment, in anticipation of servant problems that may well be considered permanent. A point perhaps worth mentioning is that steelwork was carefully planned to space ceiling beams evenly in the rooms, with girders always directly at the partition. Incidentally, the plans show an incinerator installation; still under discussion is the practicability of sink grinders for the large building.

Naturally there have been discussions of many other equipment items. Individual heat controls for each apartment is one idea that will be watched carefully. Obviously it is a good rental feature; it is one of those whose costs will be the subject of close observation. Air conditioning is another. Complete air conditioning was given much consideration for at least one of these buildings, but it is one of the items that causes an owner to lean toward the normal, as already mentioned.

Let me submit these two postwar projects as tangible evidence that apartment building design will continue to be what it always has been—largely an economic study, with the more exciting new developments, especially those that cut down rentable areas or increase investments, subject as before to the caution of the man who puts up the money.

Leet Bros.




D.
K.
K.
L.R.
11-10 x 18-0
L.R.
12-0 x 19-11
B.
B.R.
11-8 x 12-0
C.
C.
C.
C.
D.
K.
L.R.
12-1 x 17-0
B.
DR. C.
SOL
L.R.
11-10 x 16-10
DR. C.
B.
B.
DR. C.
K.
C.
B.
DR. C.
K.
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L.R.
12-1 x 17-0
SOL
L.R.
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DR. C
B.
DR. C
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SOL
L.R.
11-10 x 16-10
L.R.
12-1 x 17-0
B.
DR. C.
K.
C.
B.
DR. C.
K.
D.
K.
C.
SOL
L.R.
11-10 x 15-10
SOL.
L.R.
12-0 x 16-0
B.
DR. C
C.
K.
DR. C
B.
B.
C.
C.
C.
C.
L.R.
12-0 x 16-0
B.R.
12-0 x 14-0
K.
D
C.
L.R.
12-0 x 20-0
B.
DR. C.
D.
D.
C.
K.
DR. C.
L.R.
12-5 x 16-6
K.
K.
L.R.
12-0 x 18-6
B.
B.R.
9-0 x 12-2
0
10
20
30

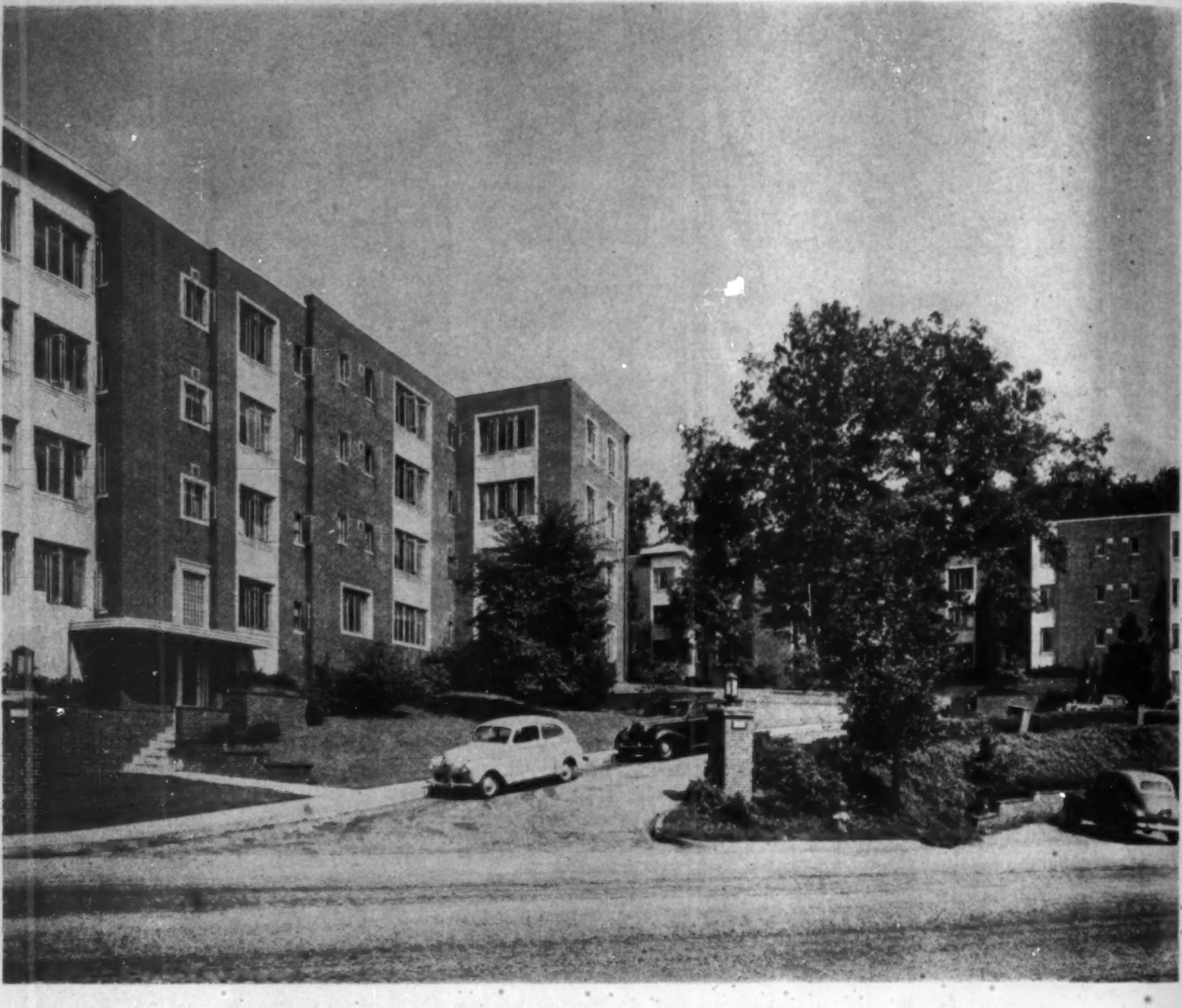
TYPICAL FLOOR

EFFICIENCY APARTMENTS FOR WASHINGTON WORKERS

Diplomat Apartments, Washington, D. C.

Joseph H. Abel, Architect

WARTIME Washington has been a center of apartment planning right through the emergency, not only because much of the design of war workers' units was guided by Washington policies, but also because of the local shortage of housing for ever new hordes of government workers, who began to descend on the city even before the war. Here is one of the earlier buildings (it was finished in 1940), which might be considered as representing more normal planning for "efficiency" apartments than some of the later ones, by virtue of the fact that it preceded materials shortages. It occupies an odd-shaped plot in the 2400 block on 16th Street, and was designed for Rosenberg & Towbes, owners and builders.



GARDEN GROUP FOR A WASHINGTON SUBURB

Prince George Apartments

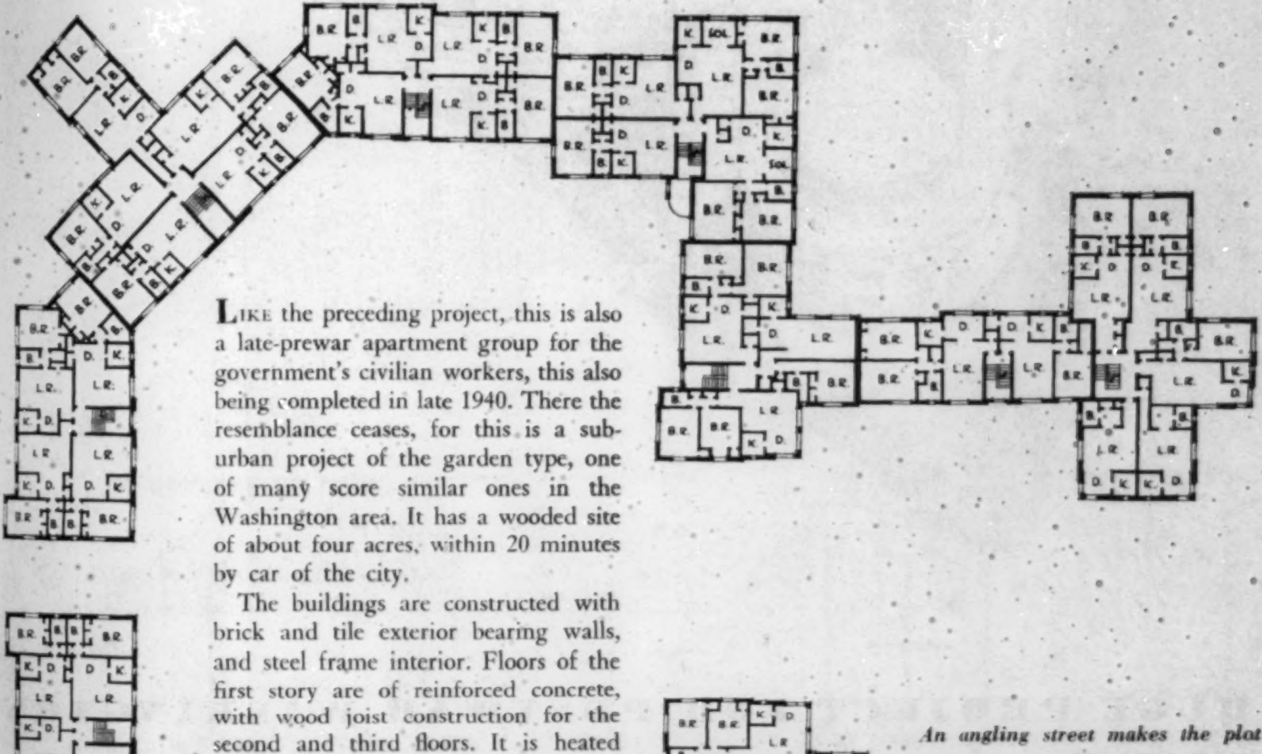
Hyattsville, Maryland

Joseph H. Abel, Architect

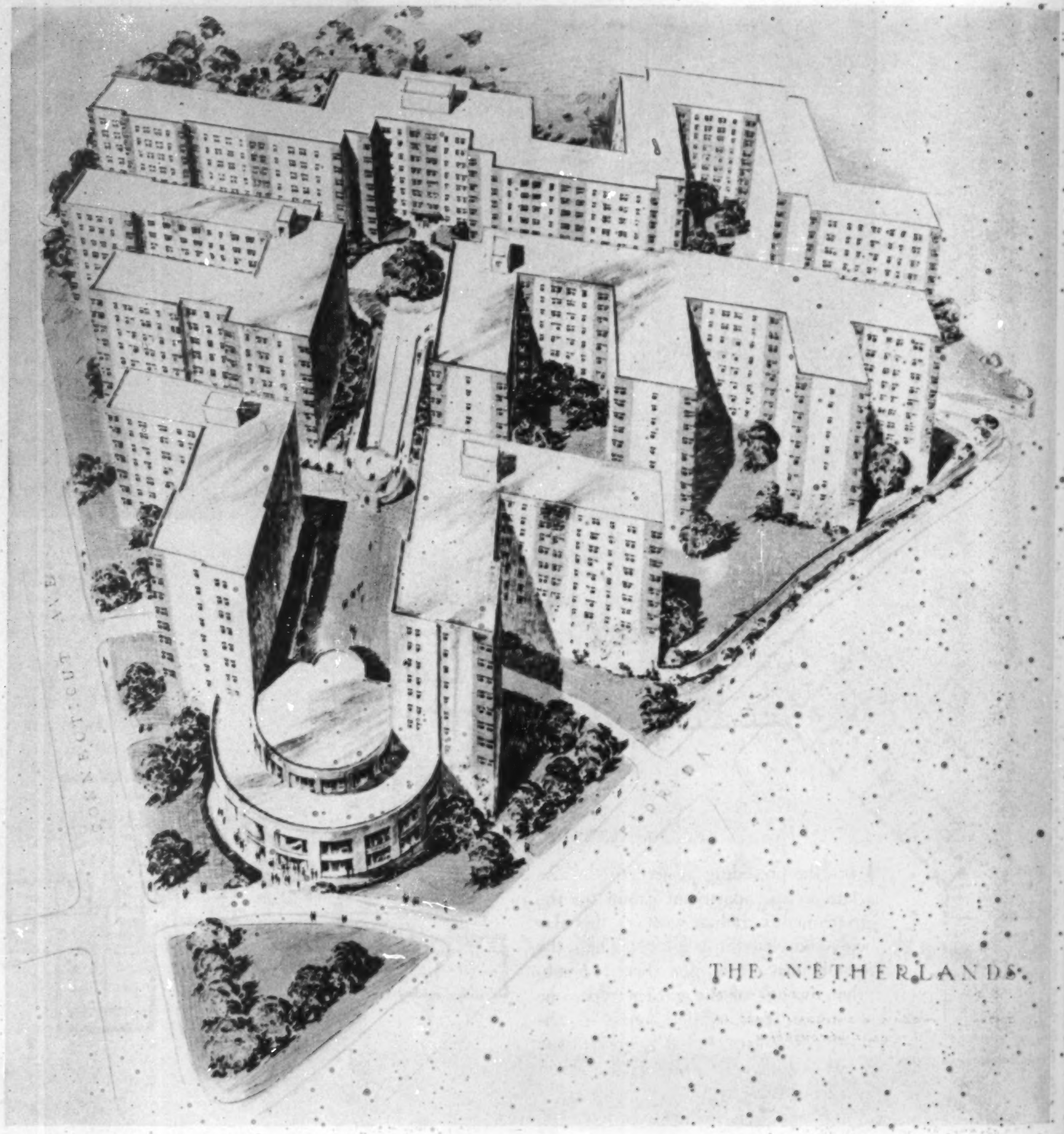
Louft & Wolf photos

Like the preceding project, this is also a late-prewar apartment group for the government's civilian workers, this also being completed in late 1940. There the resemblance ceases, for this is a suburban project of the garden type, one of many score similar ones in the Washington area. It has a wooded site of about four acres, within 20 minutes by car of the city.

The buildings are constructed with brick and tile exterior bearing walls, and steel frame interior. Floors of the first story are of reinforced concrete, with wood joist construction for the second and third floors. It is heated with a vapor steam system, with concealed convector type radiators. Eugene B. Roberts, owner and builder.

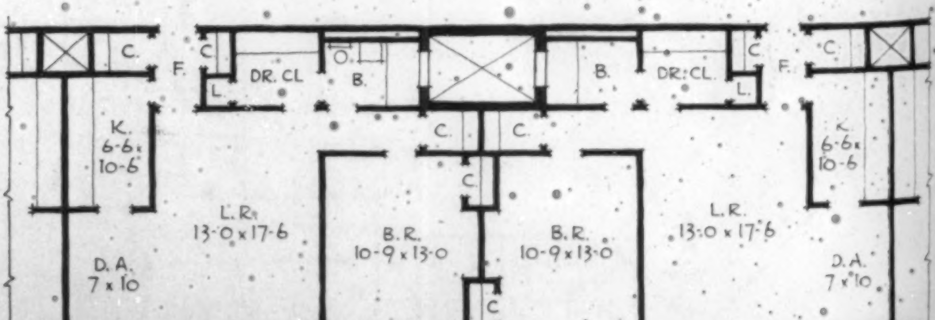


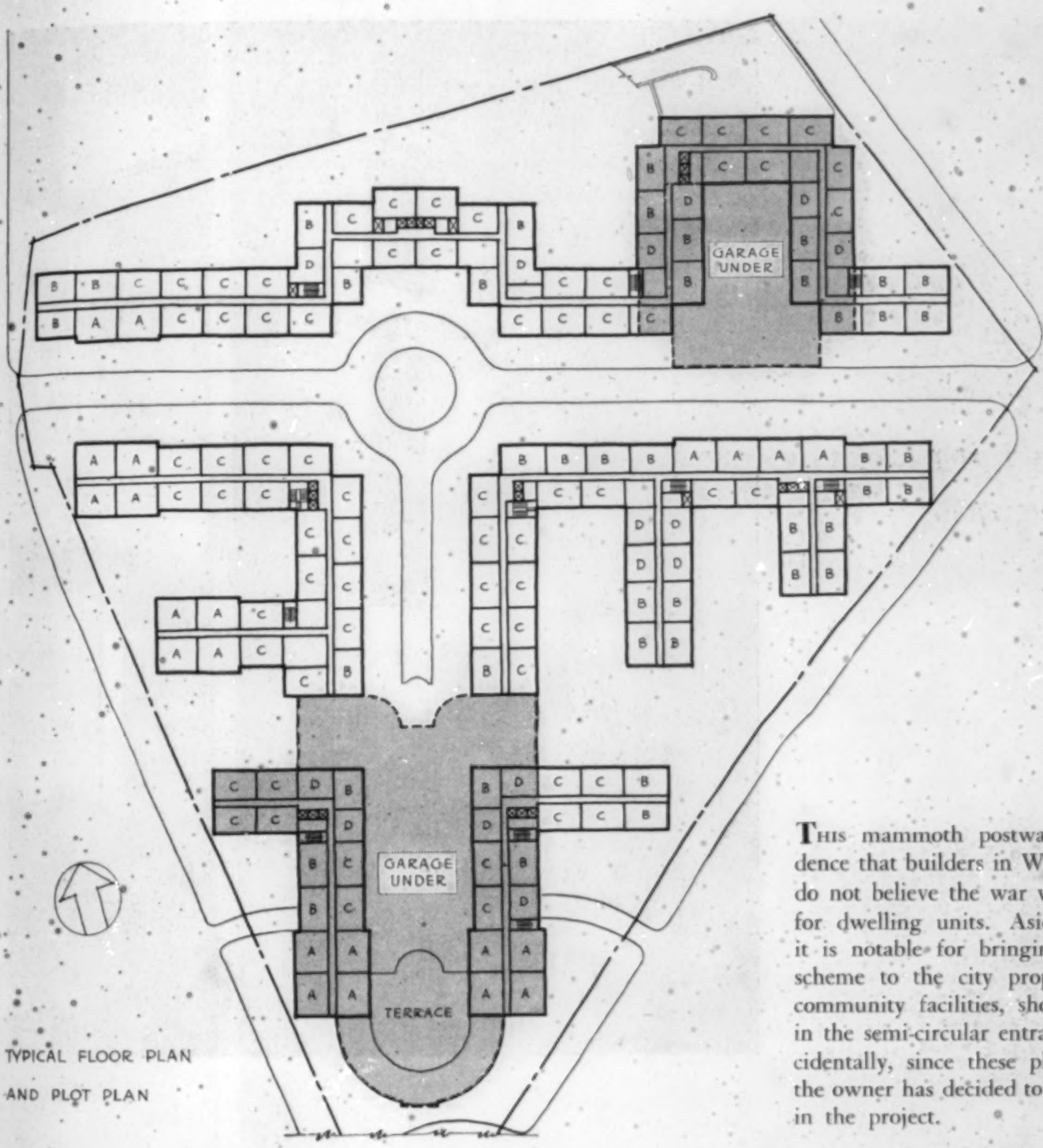
An angling street makes the plot irregular; buildings enclose a large central court. Typical plan has 45 units, of 2, 3 and 4 rooms.


THE NETHERLANDS

HUGE PROJECT FOR POSTWAR WASHINGTON

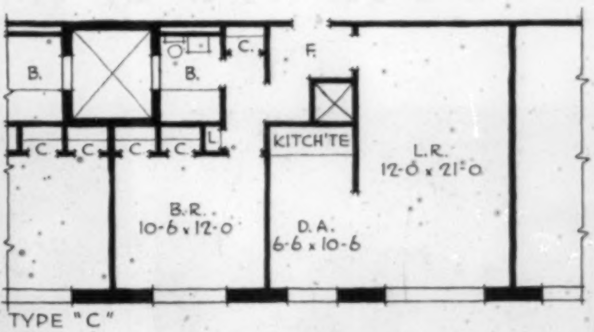
"The Netherlands"
Washington, D. C.
A. R. Clas;
Maginnis & Walsh
Architects


C.
F.
C
L.
DR. CL.
O.
B.
B.
DR. CL.
C
L.
F.
C.
C.
C.
K. 6-6 x 10-6
L.R. 13-0 x 17-6
C
B.R. 10-9 x 13-0
B.R. 10-9 x 13-0
L.R. 13-0 x 17-6
K. 6-6 x 10-6
D.A. 7 x 10
C
D.A. 7 x 10
TYPE "A"
0
5
10
15
20
25

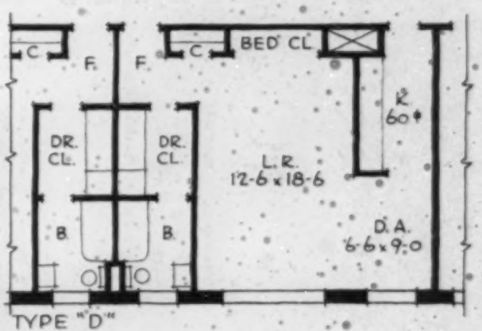

GARAGE UNDER
GARAGE UNDER
TERRACE
A
B
C
D

TYPICAL FLOOR PLAN AND PLOT PLAN

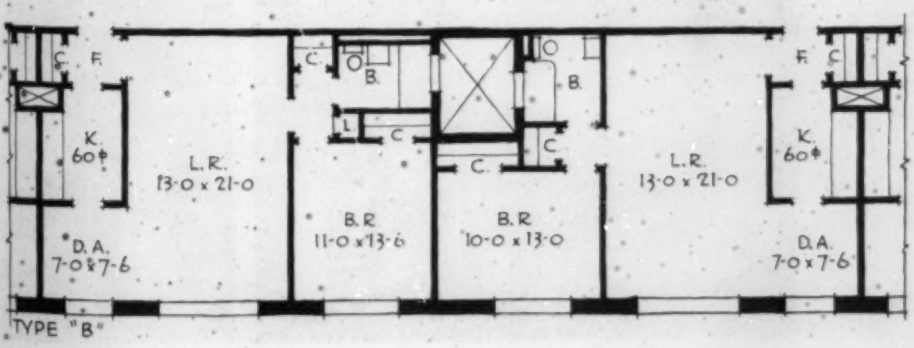
This mammoth postwar project is evidence that builders in Washington, D. C., do not believe the war will end the need for dwelling units. Aside from its size, it is notable for bringing a garden-type scheme to the city proper, also for the community facilities, shops and so forth in the semi-circular entrance building. Incidentally, since these plans were drawn the owner has decided to include a theater in the project.


B.
B.
C.
F.
C.
C.
C.
C.
L
KITCH'TE
L.R.
12-0 x 21-0
B.R.
10-6 x 12-0
D.A.
6-6 x 10-6

TYPE "C"


C
F.
F.
C
BED CL.
K
60¢
DR. CL.
DR. CL.
L.R.
12-6 x 18-6
B.
B.
D.A.
6-6 x 9-0

TYPE "D"


C
F.
K.
60¢
L.R.
13-0 x 21-0
D.A.
7-0 x 7-6
C.
B.
L
C
B.R.
11-0 x 13-6
C.
B.R.
10-0 x 13-0
B.
C
L.R.
13-0 x 21-0
F.
C
K.
60¢
D.A.
7-0 x 7-6

TYPE "B"

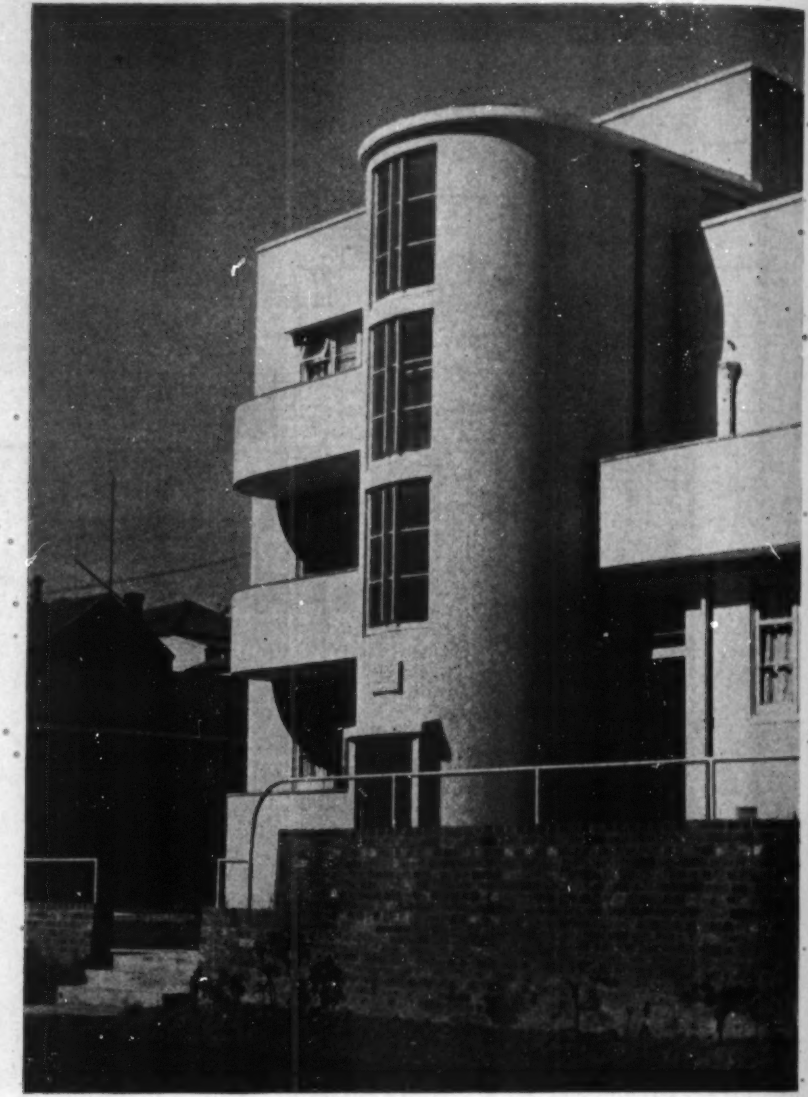
The project will contain 1029 efficiency-type apartments of four types, and some 3200 rooms

Berhampore Flats

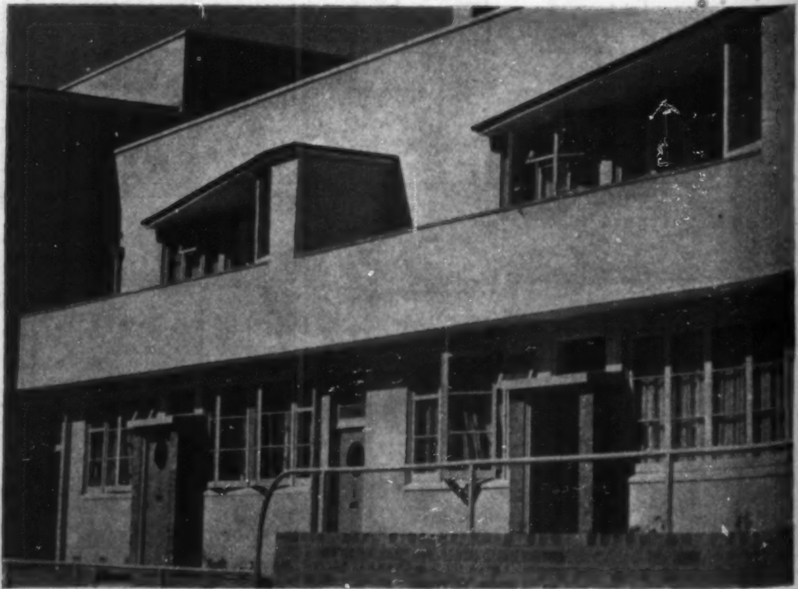
Wellington, New Zealand

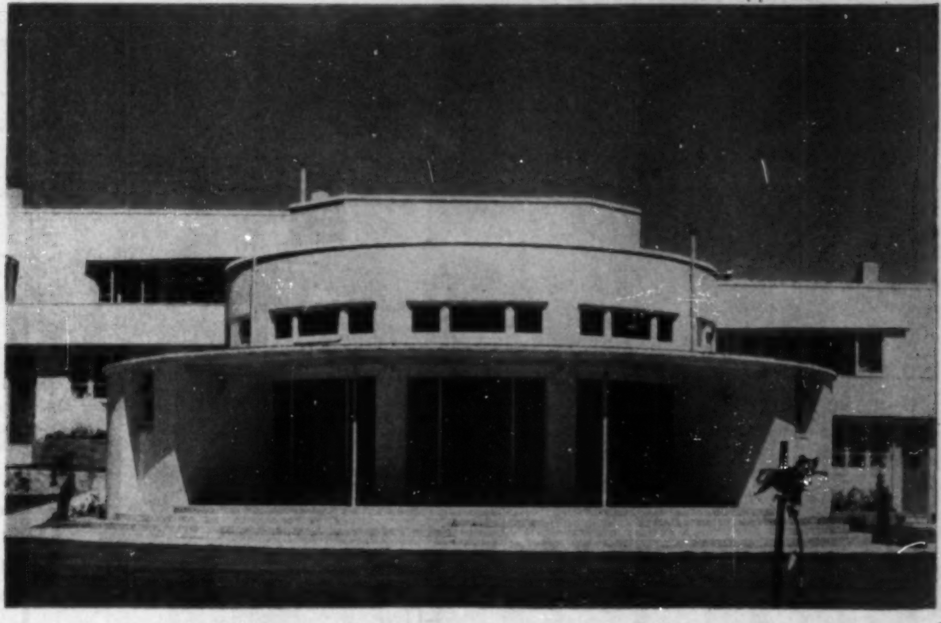
New Zealand Department of

Housing Construction



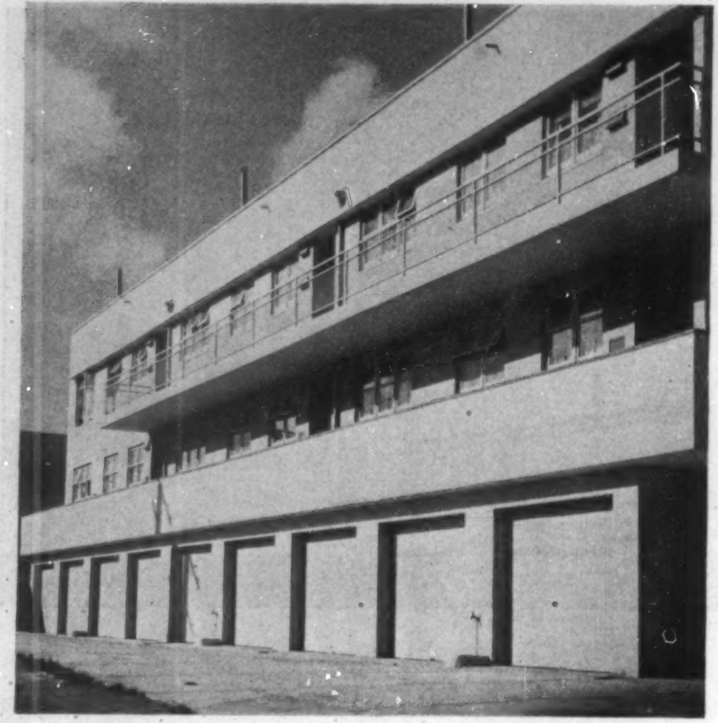
FIRST PUBLIC HOUSING FOR NEW ZEALAND



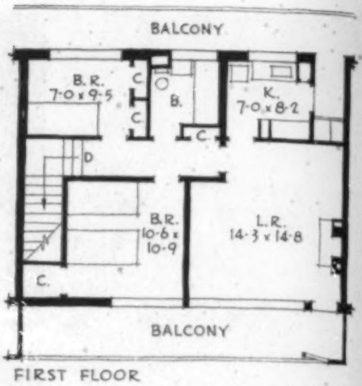


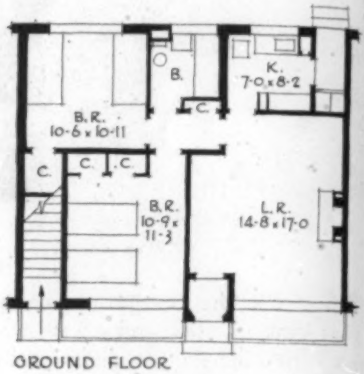
NOTABLE as the first government-built housing project in New Zealand, these units were completed in Wellington just before the start of the war. They are notable also as marking an improvement in standards in a country where housing is supposed to lag behind that of America. The scheme has been planned to give maximum sunlight, with dwelling units restricted to 25 to the acre. Windows were made as large as practicable without handicapping furniture placing. Ground floor "flats" have a fuel fireplace and easily accessible fuel bin. Those above ground are heated with an electric radiator. The kitchens "are fully equipped with cupboards, bins, drawers, food safe, drying cupboard, cooking range, terrazzo sink top . . ."

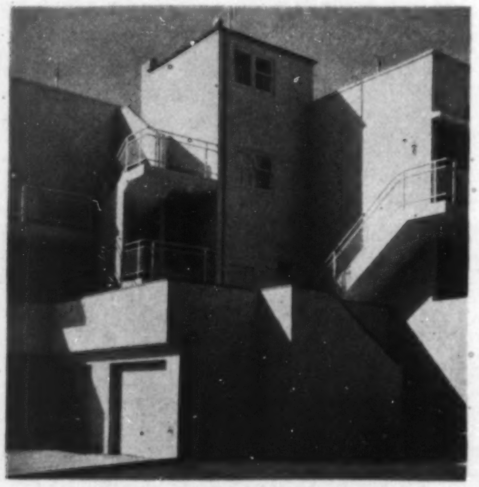
Exterior walls, dividing walls, bearing interior walls, first floor and roof are of reinforced concrete. Behind the 6-in. exterior walls there is framing of 2 by 3-in. studs, with plaster. The ground floor is of wood construction some 2 ft. above ground; upper floors are of 4½-in. concrete slab. Roof and sun porches are of 4-in. slab with screening and 1-in. asphalt. High winds and the possibility of earthquakes had a considerable bearing on the design. Exterior walls are plastered, with cement paint finish.

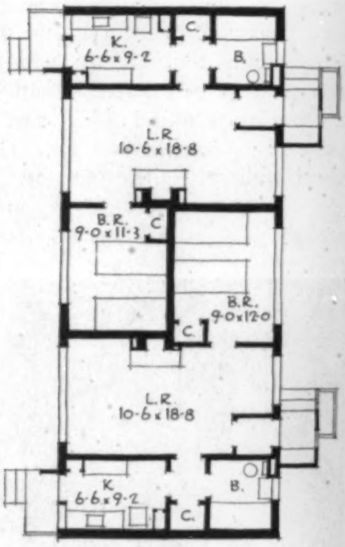


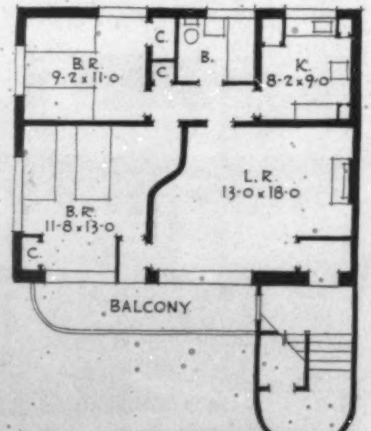
The New Zealand housing project has 11 garages for the 50 apartment units; placed in the rear to keep auto traffic off the central court

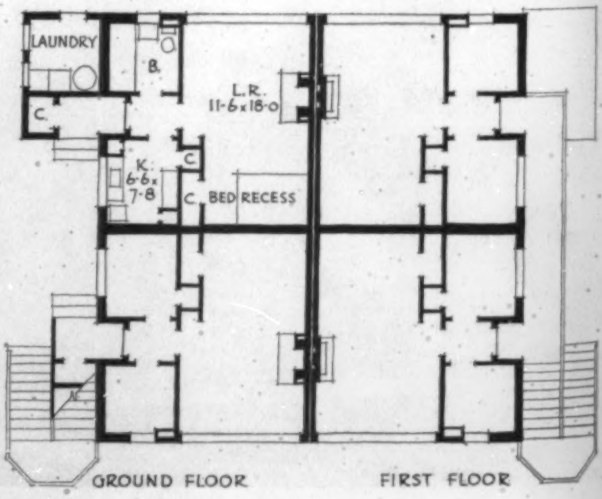

BALCONY
B.R. 7-0x9-5
C
C
B.
K. 7-0x8-2
C.
D
B.R. 10-6x 10-9
L.R. 14-3x14-8
C.
BALCONY
FIRST FLOOR


B.
K. 7-0x8-2
C.
B.R. 10-6x10-11
C.
C.
C.
B.R. 10-9x 11-3
L.R. 14-8x17-0
GROUND FLOOR




K. 6-6x9-2
C.
B.
L.R. 10-6x18-8
B.R. 9-0x11-3
C
B.R. 9-0x12-0
C.
L.R. 10-6x18-8
K. 6-6x9-2
B.
C.


C.
B.R. 9-2x11-0
C
B.
K. 8-2x9-0
L.R. 13-0x18-0
B.R. 11-8x13-0
C.
BALCONY


LAUNDRY
B.
C.
L.R. 11-6x18-0
K. 6-6x 7-8
C
C. BED RECESS
GROUND FLOOR
FIRST FLOOR

PLANNING FOR LOWER MAINTENANCE

By Lewis Mauger*

AN APARTMENT BUILDING is a sound investment only if it can rent in competition with other buildings in its class and neighborhood, if it will retain its usefulness over an extended period of time, and if it can be maintained and operated at a figure low enough to provide a wide margin between the rental income and operating costs. Out of this margin must be taken expenses for taxes, financing, and amortization. In many instances, the amount by which the maintenance and operating costs can be held down is a large item in the net profit.

The Design. The design affects both rentability and ease of operation. Design and plan plus materials and equipment form the basis for the expense of maintenance. There is always some clash between the renting and operating departments as to how many gadgets and how much specialized equipment should be provided. A balance between these two phases must be found. Generally speaking, from a maintenance point of view, the fewer excess items and the simpler the type of equipment, the lower the maintenance. On the other hand, simplification to the extent of requiring more manual operation would increase the operating labor required.

In general, the layout of a building should provide as much flexibility of operation as possible. If there are two or more elevators, the apartments should be designed so that if, for any reason, one elevator is closed down, another elevator will be accessible. Whenever possible the main lobby should be connected by passageway to the service entrance so that if an entrance door is out of order, or if an elevator is out of service, passengers may go from one lobby to the other without going out of the building.

Elevators. Flexibility in elevator provisions includes the installation of self-service features, whether or not it is intended to keep an operator on the car at all times. This dual control has often proved its desirability when an operator is not available, or after midnight when it is often not necessary to have a man in attendance. The push-button control has become so widely accepted in recent years that it is possible that during the life of a postwar building it will become a general practice to use the self-service elevator. It should be noted, however, that self-service cars have more complicated controls and must be maintained by mechanics who understand the specialized circuits and are trained to make the necessary adjustments.

Lobby and Corridors. From a maintenance, as well as from a construction angle, main lobbies and corridors should be limited in size, but not to the extent that it becomes difficult to move furniture and other materials through them. Right-angle turns should be avoided, both because of the difficulty of access and the difficulty of maintaining the corners which are readily chipped and are discolored by fingermarks.

Windows. From a purely maintenance point of view, the fewer the windows, the lower the maintenance cost, because windows require repairs, painting, cleaning, and because they admit drafts and air which add to the heating load during cold weather. Bent frames and broken panes add to maintenance costs. Double-hung windows can usually be kept fairly tight. Casements are more subject to wind damage if tenants are careless. From the tenant's standpoint it is desirable to have a light-weight sash, and from the operator's standpoint it should be heavy enough to stand up under continued use. A non-corrosive metal is more desirable than a corrosive metal or wood, since it does not require periodic scraping and repainting. All windows should include some type of permanent weather stripping.

Main Entrance. The main entrance to a building should have either a double set of entrance doors, or a revolving door, to keep out excessive drafts and to prevent cooling of the lobbies, elevator shafts, etc. If swing doors are used, and it is wise to have them open automatically, an electric eye can be used. While this may make it unnecessary to have a doorman on duty, the introduction of door controls and motors adds additional items for maintenance.

Master Antennae. Such a system should be installed in all apartment buildings to eliminate the indiscriminate hanging of wires on the exterior and roof. Many building operators are taking advantage of wired musical programs as a renting feature, and are having the connections made through the master antennae system. This involves little maintenance and avoids static which may be generated by some of the building electrical equipment or by outside sources.

Communications. In all higher-type apartments, inter-communicating phones between the apartments, main lobby, superintendent's office, motor rooms, boiler room, and shops should be built-in equipment. The phone system will save a considerable amount of time for the building employees during the life of the building and will also appeal to tenants. If there is a regular attendant in the main lobby at all times, the phone system may be operated from a board in the lobby. Otherwise, an automatic system should be installed. Except in the hotel type of building, this system should have no connection with the regular outside telephones.

Heating. Answering heating complaints often consumes a substantial amount of an employee's time. It is important that the heating system be adequate, so designed and installed as to require the least possible attention and to make it accessible for quick maintenance and repair.

Warm-air heating, with humidification and the possibility of future cooling units, is not practical for larger buildings because of the space required for ducts. Hot-water heating, although providing an excellent medium for controlling temperatures, requires large pipes and radiators. It is probable that steam-heating systems, with convector-type radiators (and possibly heating panels), will still remain the standard for apartment houses.

Except for relatively small buildings, one-pipe systems should be avoided because of the nuisance of air valves and the lack of controls. Best results seem to be obtained with either vapor or vacuum-type, two-pipe systems, with packless, modulating radiator valves and thermostatic traps. Radiator enclosures should be designed so that the traps are accessible for repairs and replacement of parts.

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*Supervising Engineer, Brown, Wheelock, Harris, Stevens, Inc., Chairman Research Committee, Real Estate Board of New York.

The wall in back of the radiator should be well insulated to prevent abnormal escape of heat. A reflective surface behind the radiator increases its efficiency. A properly designed enclosure, with large openings top and bottom, acts as a convector and increases the effective circulation of warm air.

Steam boilers may be either of the cast-iron or steel type, with preference for the latter since there is less danger of damage due to adding cold water too rapidly. Steam can usually be generated more quickly and efficiently and submerged type hot-water heating units can be added readily. The use of such hot-water coils, without storage tanks, reduces the space required for hot water generation and keeps down the original cost of the system. It also eliminates the maintenance expense for the hot-water tanks, and numerous tests have shown that it increases the efficiency of a plant. The fuel required for domestic hot water is often 25 to 35 per cent of the total fuel burned and instantaneous coils may reduce the consumption of hot water by 10 to 20 per cent so that this represents a substantial item over a period of time.

At least two boilers should be installed, unless steam is obtained from an outside source. This arrangement provides flexibility in operation since, in mild weather, one boiler is sufficient to carry the load. Also, service is maintained if one of the boilers is being cleaned or repaired. If the boiler is fired automatically with a stoker, oil burner, or gas jet, full automatic controls should be installed. These will include a sensitive pressurestat which can be set within a few ounces, an aquastat for control of boiler-water temperatures (to generate domestic hot water) and a low-water cutoff. It should also include a modulating device so that fuel may be burned at less than full capacity, and some type of timing device so that the burner may be closed down for periods of time. Heating controls are considered essential to provide tenant comfort, and for fuel economy with a minimum of attention by the building employees. The room thermostat is the simplest device, but involves the difficulty of finding a location which will represent the average of all sections of the building. An exterior thermostat is preferable, providing it is connected with a well-designed regulating apparatus, since it can be set so as to provide the proper proportion of heat called for by the outside temperature, and since it will anticipate temperature changes before these changes will affect an interior room. A further refinement of this can be effected by balancing the outside thermostat against a thermostat on a key radiator in such a way that the control will call for heat only when the key radiator temperature is below that required for the actual weather conditions. A less complicated control may be arranged by a time clock which is manually set to burn the fuel intermittently with the on-and-off periods determined by the operator; or the "on" period may be the time required for the boiler to reach the pressure required for full steam circulation in the building, and the "off" period may be varied at the discretion of the operator. Manually-set controls are a considerable improvement over no control, but the thermostatic type is preferable as being both the most accurate and the most economical. The thermostatic regulator may function to turn the steam on and off intermittently, as called for by the outside temperatures, or it may operate to vary the pressure in the system, although normally maintaining a continuous circulation. The first arrangement is satisfactory if the cycles are relatively short so that the entire system does not ordinarily cool down between cycles, and a tenant does not have to wait for a long period after turning on a radiator valve before the next cycle begins. The modulating type is superior from a comfort standpoint since there is not the continuous variation of radiator temperatures and since there is less expansion and contraction throughout the heating system. Individual room or apartment control which can be effected by means of room thermostats controlling a steam supply to radiators is appreciated by tenants as their requirements vary. A type of radiator having a built-in-regulating device may be available after the war. With either form of local control, a constant steam pressure would be maintained whenever heat might be required. A local control system has the advantage of supplying any temperature desired by the individuals occupying the space, and this type of control will probably have a renting appeal. It naturally increases the installation cost and might increase maintenance cost. If tenants open windows without turning down the thermostats, there will be increased steam consumption.

Traps for drips from heating mains and risers should be the ball-float type, with or without a thermostat element, rather than a straight thermostat type. It is desirable to keep the return lines from the drip traps separate from the radiator return lines because of the differences in temperature and pressures.

Expansion joints on risers and returns should be accessible; an access door should be provided so that the packing can be renewed or replacements or repairs can be made when necessary. Great care should be exercised in the installation of all horizontal lines, especially radiator branch run-outs, to make certain that they are properly pitched and will remain pitched, after allowing for expansion of the lines and settlement of the building.

Air Conditioning. Just as central refrigeration systems have been superseded by unit refrigerators, so central ventilating and air conditioning systems will probably give place to room units which can be installed at a window. The individual unit gives greater flexibility of control and can be installed at the tenants' option. The operating expense is usually carried by the tenant rather than the landlord, except in cases where electric current is not paid for by the tenant.

In making the installation of a unit, provision should be made for closing the air supply tight during the cold weather to eliminate drafts and prevent waste of heat. Recirculated air should be used to as great an extent as possible. Provision should also be made for opening the window so that the window cleaner may have access to the exterior.

Plumbing. Wherever there is a possibility of corrosion, as indicated by an analysis of the water supply, noncorrosive metal pipe or tubing should be specified for hot and cold water supply piping. Because of dezincification, which often takes place in yellow brass, the copper content should be at least 85 per cent if brass pipe is used.

Flush valves of a good design, with silencing features, are satisfactory for water closets and save bathroom space even though, in some cities, codes require a separate water supply.

In showers, under no circumstances should there be a valve that will shut off the shower head since this may make it possible for water to pass between the hot and cold water systems if the shower supply valves are open. A thermostatic control, which will prevent scalding in a shower, is good insurance.

Non-crazing tile for the lower section of the wall and hard-troweled, water-proof cement for the upper section have proved satisfactory. The finish may be a gloss paint or water-proof paper.

Separate control valves for the individual hot and cold water risers and mudlegs at the bottom of the risers are helpful in the maintenance of the system.

Forced circulation of hot water in a large building, either by means of a pump or an injector fitting, will assure immediate hot water service at all taps and will make it possible to supply hot water from the generator at a lower temperature.

If central exhaust fants are used for ventilating interior bathrooms, kitchens, or corridors, the individual registers or ducts should be adjusted and the fan's speed should be varied so that the amount of air exhausted may be reduced in cold weather. Power consumption will be lower if the fan motor continues to operate at a constant speed and the reduction is made in the change in pulley ratios by shifting a belt.

Utility Space. In any building large enough to have maintenance work performed by building employees, provision should be made for shops for painters, carpenters, and plumbers. The paint shop should have good ventilation and a sprinkler system. A large slop sink should be installed in an accessible place in the basement and, in buildings with large branch corridors on the upper floors, additional sinks upstairs will save considerable time for the cleaners.

A storeroom which can be kept locked is required for building supplies, in addition to storage spaces which are provided for tenants' use.

If laundries are installed in the basement for the use of tenants, less space is required if they are public laundries instead of private. The public laundries also lend themselves to the use of coin-type washing machines, and centrifugal dryers, both of which should be included as standard equipment.

Lighting. Sufficient lighting outlets should be supplied to illuminate all public areas to at least two footcandles to prevent accidents. Lights should be so placed that any one light which burns out will not leave any areas without some illumination. If there is a possibility that bulbs may be stolen, they may be enclosed in a locked wire basket, or may be locked in place by means of one of the patent lamp locks. Left-hand screw bulbs may be used if desired.

Elevator lighting should always consist of more than one lamp and it is preferable that the lamps be set so they cannot be broken by material which is carried into a cab. If cove lighting is used, fluorescent bulbs will throw off less heat than incandescent lights.

In lobbies, if the bulbs are concealed, they should be readily accessible and the lamp spaces should be ventilated. Interior steps in a lobby should have spot illumination to prevent tripping.

Finishes. Walls separating apartments should include some sound insulation to prevent noises and voices being heard in adjoining apartments. Soundproofing should be an inert, fireproof material. Walls should be properly keyed to prevent cracking at corners and ceilings.

Wall finishes in service areas which have proved most satisfactory are glazed tile or brick, or similar material which does not require painting and which is not easily defaced. In branch service areas plaster, finished with gloss paint, light in color and with a darker mottled dado, is satisfactory.

For entrance lobbies precast stone or marble are most desirable. If the expense for these materials is too great, painted walls, preferably with a glazed finish, are accessible but these have to be redecorated at regular intervals, an added maintenance item. Main lobby floors of precast stone, tile, marble or terrazo are easy to maintain, especially if they are treated with a hardening process to prevent undue wear and to fill the pores. In service areas, hard-troweled colored cement wears well and is attractive.

For elevator enclosures, wood or enameled metal have both stood up fairly well. It may be that some of the newer plastics may prove to be well suited for this service. Black plastics have already been used with satisfaction in service elevators.

Elevator floors of asphaltum, rubber, or linoleum tile have good wearing qualities, but the recent trend toward the use of carpet in high class apartments tends to keep the upper floors cleaner and drier since the carpet takes much of dirt and moisture from shoes. Where carpet is used, it should be removable and a duplicate set provided.

Wall finishes within an apartment are ordinarily renewed every two or three years and colors are subject to the whims of the occupants. The paints which are applied should not build up unduly or tend to flake or scale after several coats. Most uniform results seem to be obtained by the use of ready-mixed paints obtained from a reputable manufacturer. Wherever possible, a washable paint should be used so that the appearance may be renewed between scheduled paintings, by either hand or machine washing.

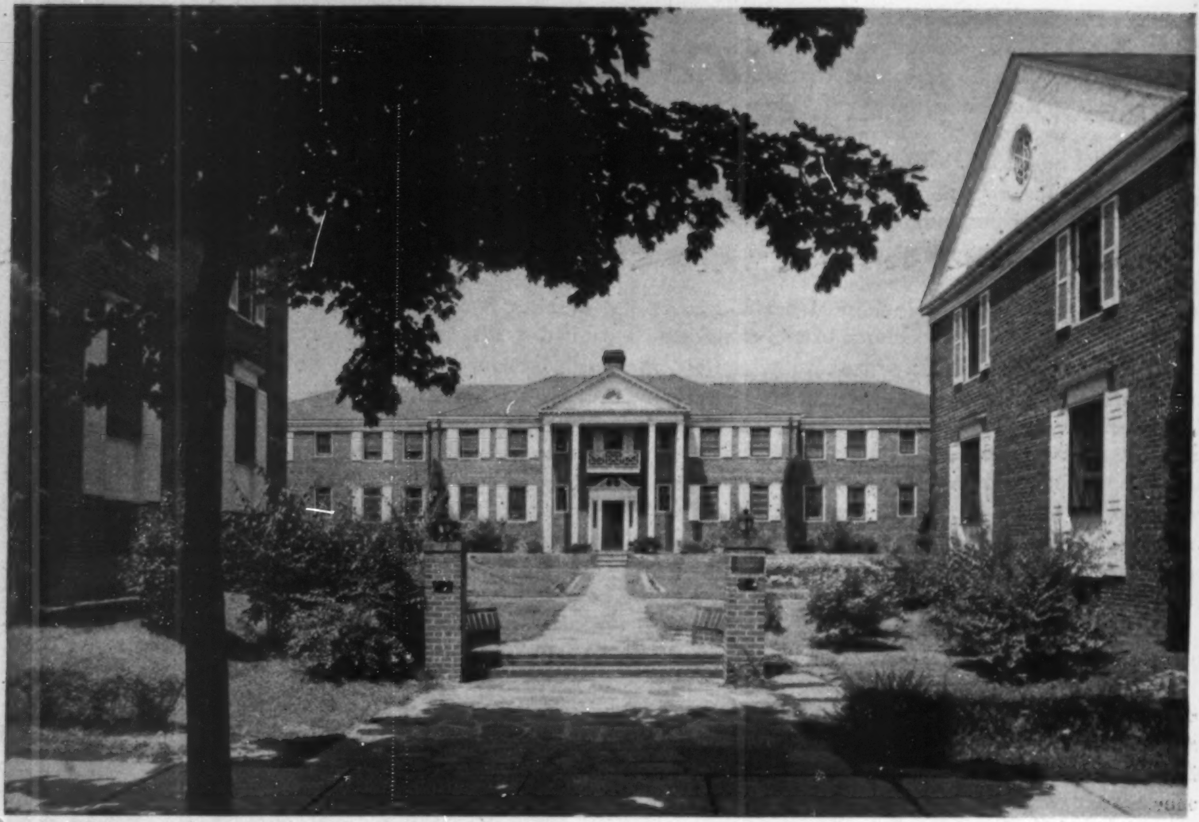
The protection of exterior metal by means of red lead and a good coat of aluminum, asphaltum or house paint, is important to prevent rust and the need for frequent repainting. This also applies to mechanical equipment such as pumps and metal in laundries.

Elevator shafts should always be painted to prevent dusting of the mortar due to the suction caused by the movement of the elevator.

Cylindrical iron water tanks may be protected inside by low-soluble cement linings and rectangular tanks may be coated with one of the special bituminous products developed for that purpose.

Boilers and steam piping and stacks may be painted with heat-resistant aluminum paint. If the pipe system is complicated, it is desirable to paint plumbing and heating pipes in colors to designate the use of the pipes.

The professional managers of investment buildings welcome the opportunity of cooperating with architects in the designing of a building and in the specification of materials so that low maintenance and operating costs will be assured. Experiments in the use of new materials which may become available after the war should be carried on jointly in the hope that improvements in design and equipment may be included in future structures.



CARTERET VILLAGE

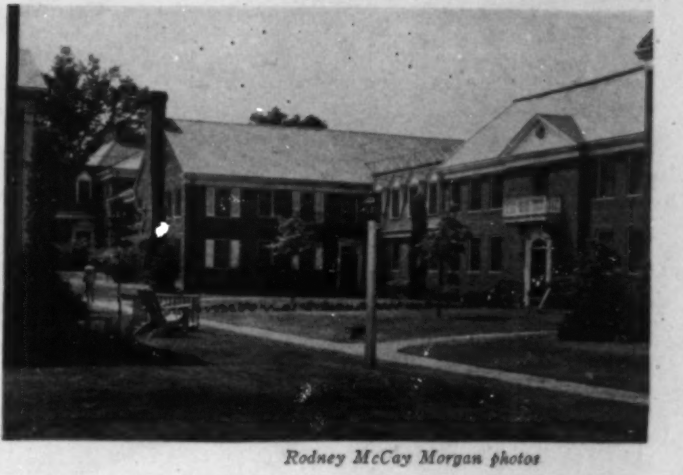
Orange, New Jersey

Kenneth W. Dalzell, Architect

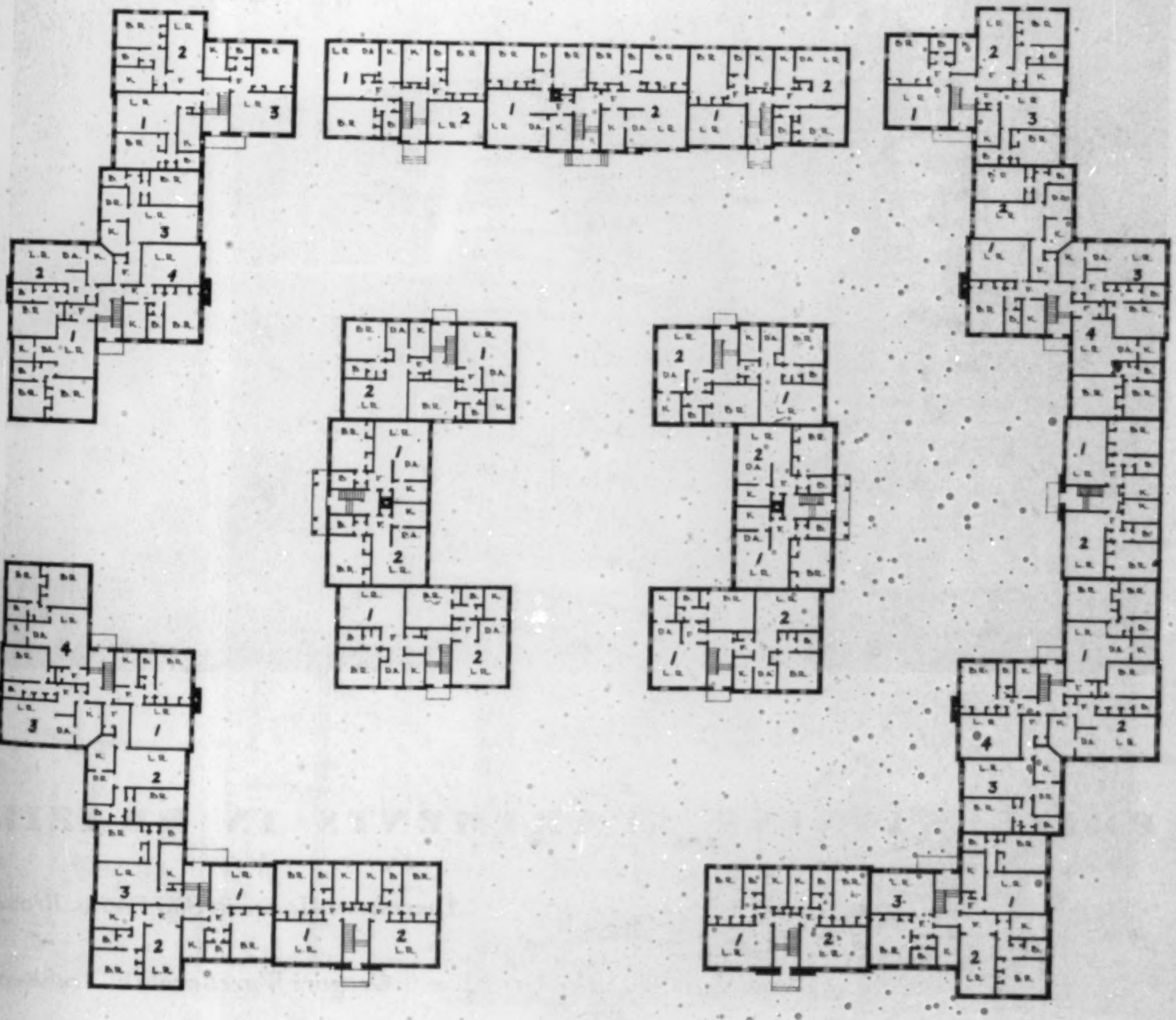
THE PROBLEM presented to the architect was to create a two-story investment apartment group in a suburban community, retaining a "garden" atmosphere. Land value was high, the location desirable. There was a fine playground across the street, and the three-acre plot was adjacent to the high school.

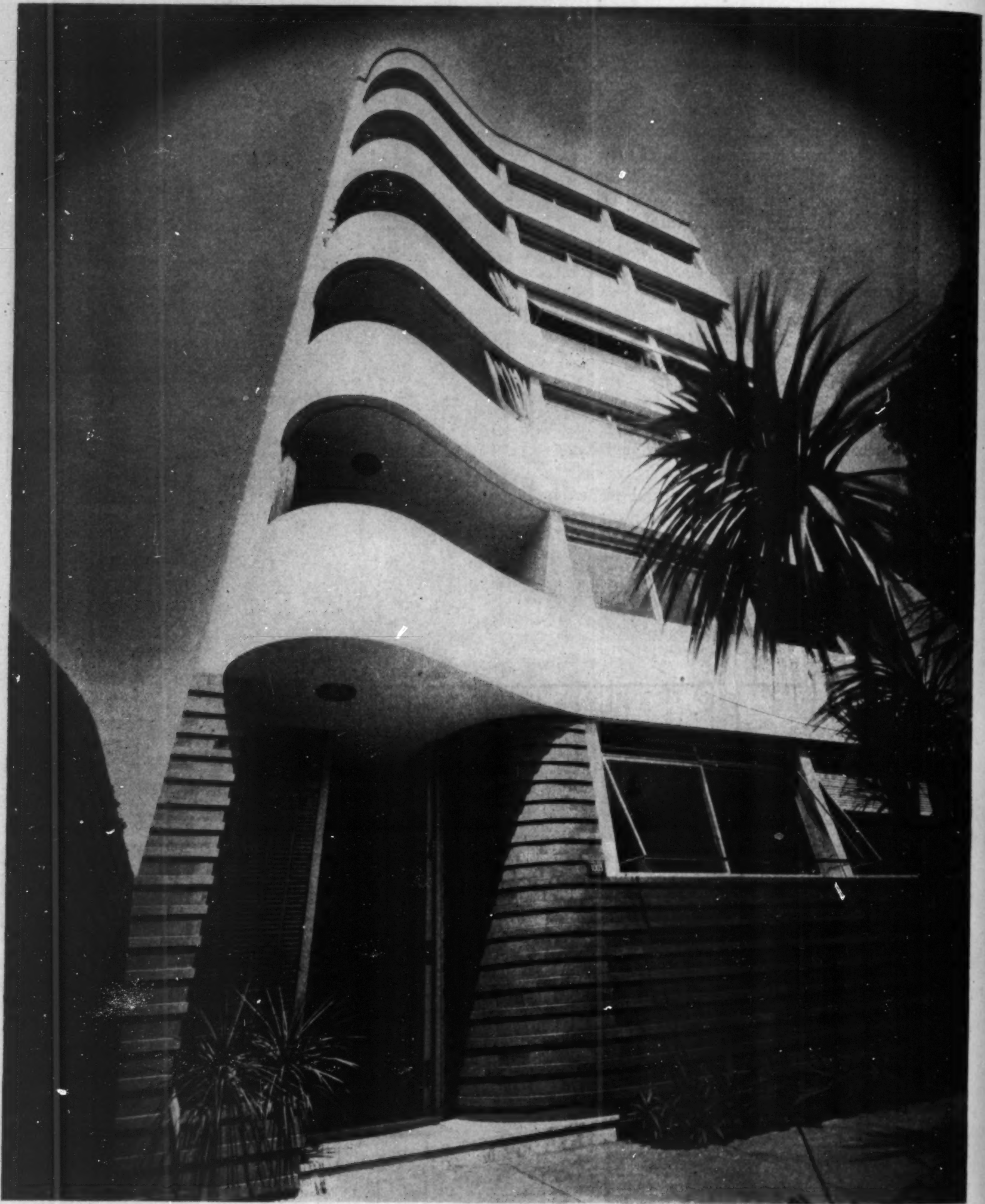
There are three street frontages and a row of some 50 private garages was placed along a minor street. In keeping with the prevailing architecture of the neighborhood, the owners felt that brick Colonial would enhance rentability. As the development was finished just as the war caused the stop-building order, renting, at over twenty dollars per room, has not been a problem. Apartments are small units, 3 to 4½ rooms each.

The face brick is backed with concrete block, furred and plastered. Sloping roofs are of slate, flat roofs of built-up roofing. Each apartment block has its own steam heating plant, all operated by the same janitor service. Separate heating plants represent a lower first cost than a central plant.



Rodney McCay Morgan photos

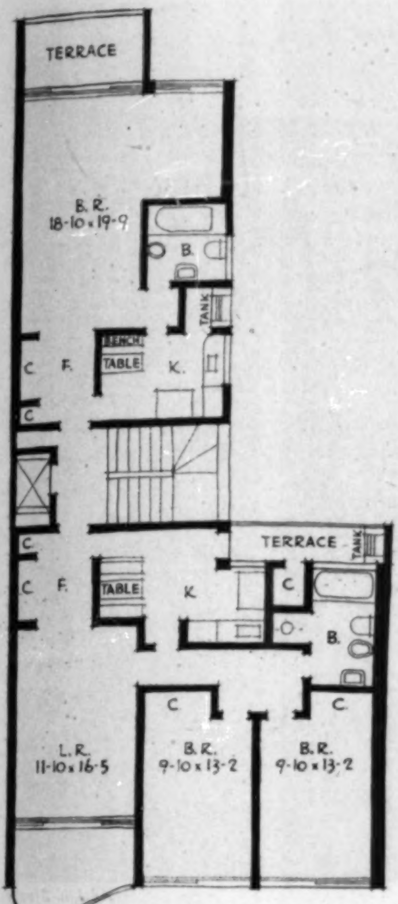




PRIZE WINNING APARTMENTS IN BRAZIL

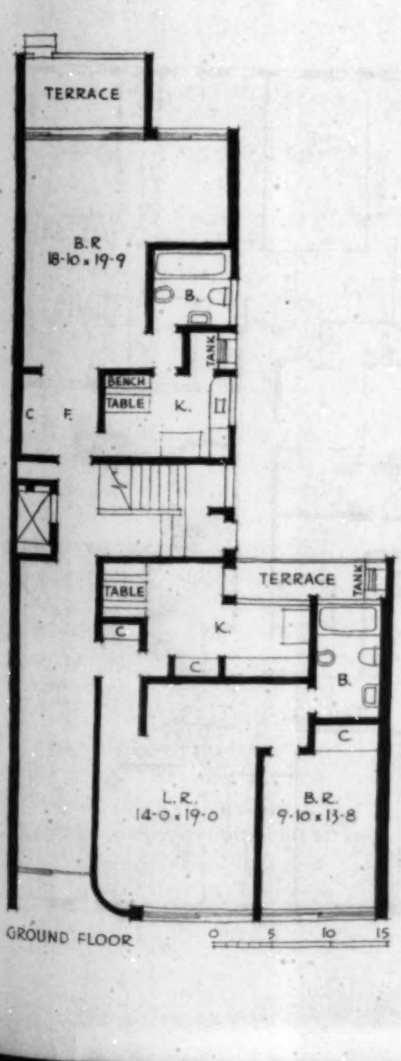
Apartment House in Sao Paulo, Brazil

Gregori Warchavchik, Architect

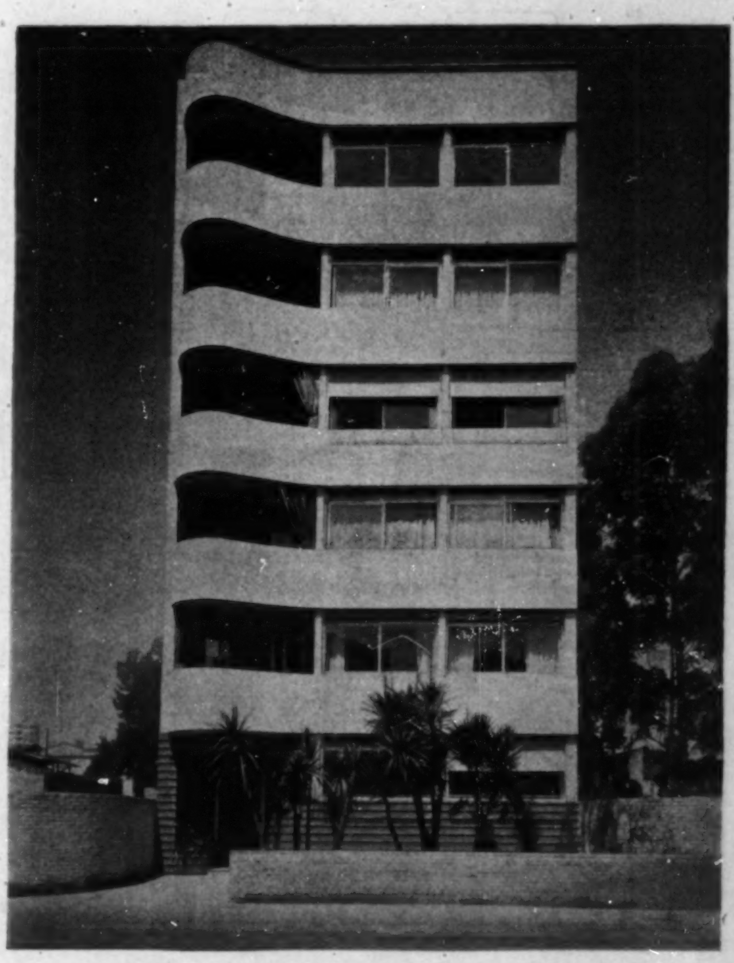

TERRACE
B. R.
18-10 x 19-9
B.
TANK
BENCH
TABLE
K.
C
F.
C
C
TERRACE
TANK
C
F.
TABLE
K
C
B.
C
C
L. R.
11-10 x 16-5
B. R.
9-10 x 13-2
B. R.
9-10 x 13-2

1ST TO 6TH FLOORS

THIS "boarding house" (in the terminology of our South American correspondent) won the first prize in the 1942 competition of the city of Sao Paulo for "finest front" on a residential building. It gives a good example of the small or efficiency-type apartment building, South American version. North American housewives would probably offer outspoken criticism of the kitchen layouts, but no doubt find questions to ask about the bathroom plans. Like most buildings of any height in South America it is built of concrete, with reinforced concrete columns, interior columns built into partitions.


TERRACE
B. R
18-10 x 19-9
B.
TANK
BENCH
TABLE
K.
C
F.
TABLE
TERRACE
TANK
C
K.
C
B.
C
L. R.
14-0 x 19-0
B. R.
9-10 x 13-8
0
5
10
15

GROUND FLOOR

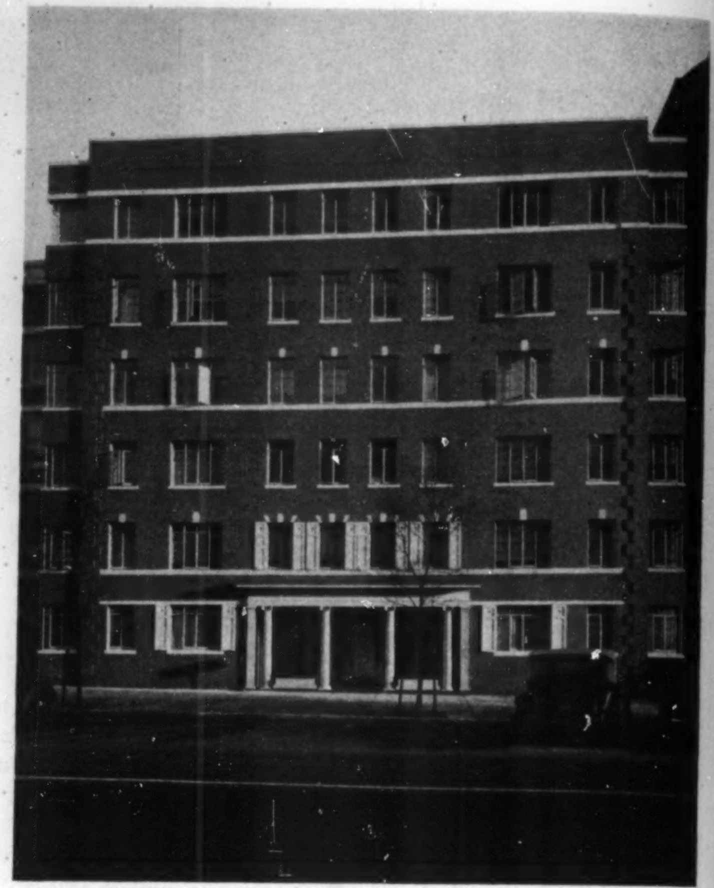


LATE-MODEL PLAN FOR SMALL LOT IN A CONGESTED AREA

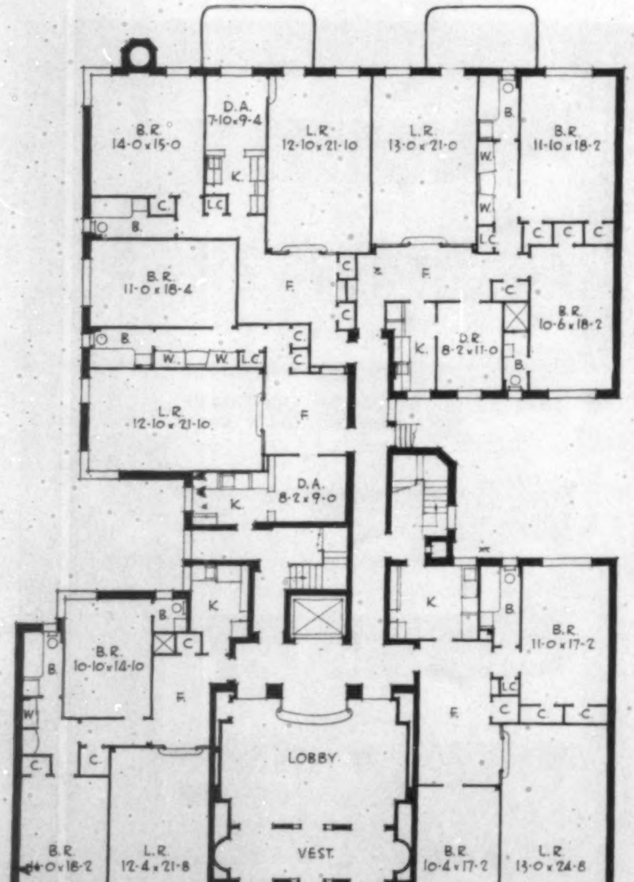
No. 519 East 86th Street, New York

Arthur Weiser, Architect

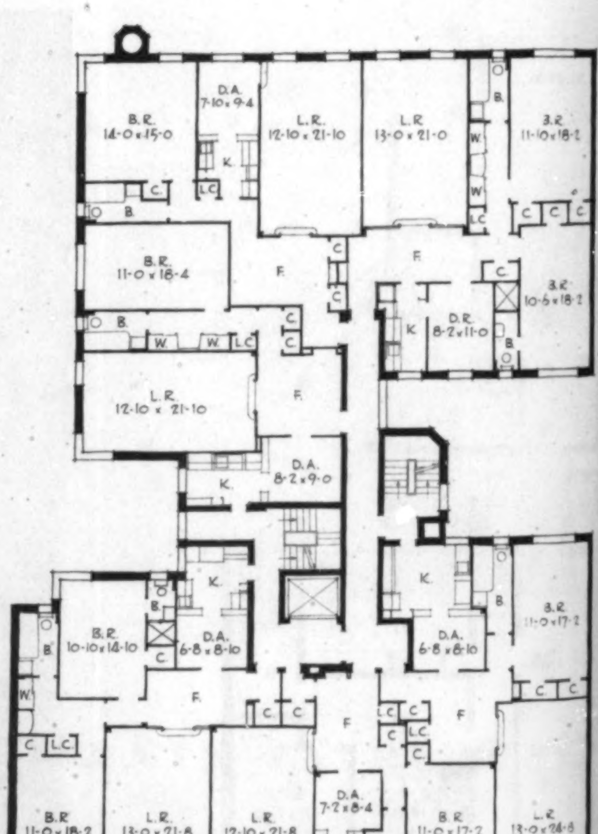
WHILE the overall design problem here was typical of many others for big-city lots, it had one special complication. The owner considered the plot, which was 75 ft. wide, too narrow for a fireproof building; thus the architect had the task of fitting in the exit requirements for a non-fireproof structure, and, the location being in a high-rent neighborhood, it should be done without exposed fire escapes. The courts are slightly larger than the law requires, but permit extra rooms at the rear of the building.



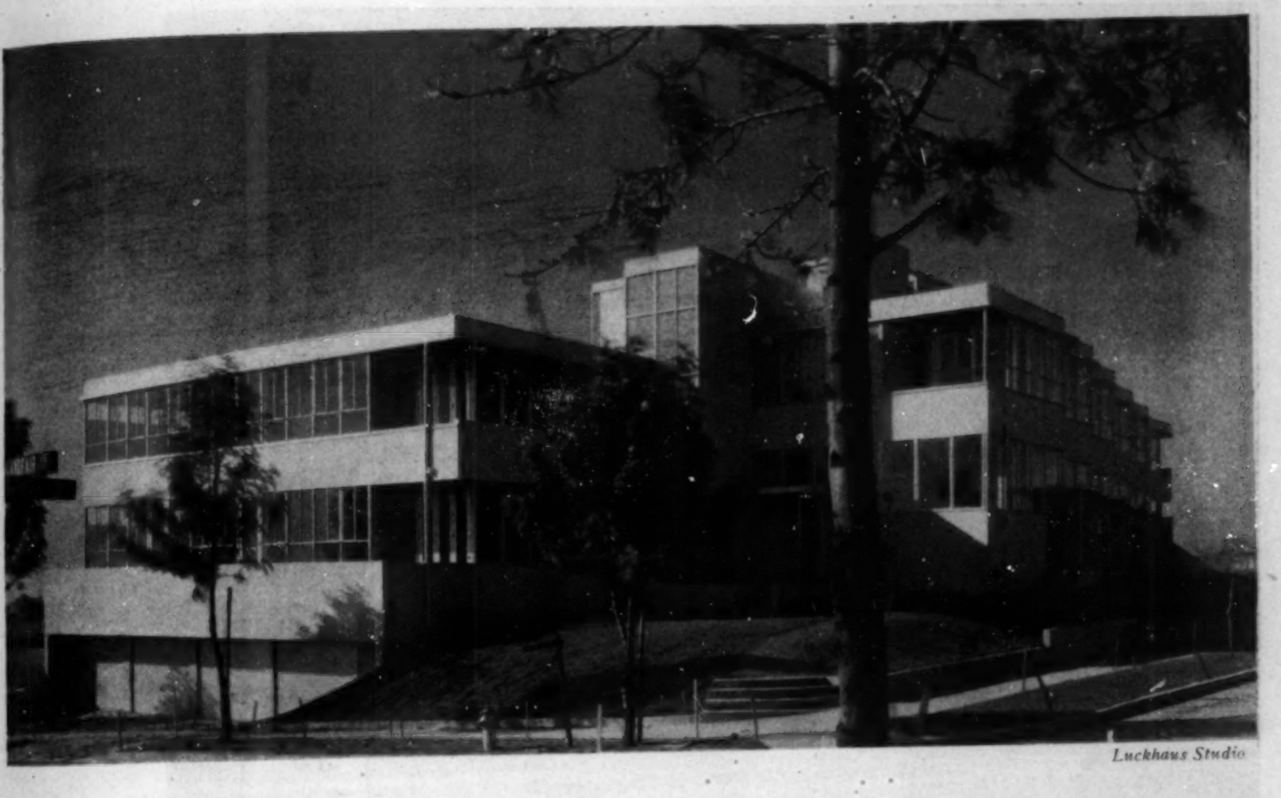
Adolph Studly


B.R. 14-0 x 15-0
D.A. 7-10 x 9-4
K.
L.C.
L.R. 12-10 x 21-10
L.R. 13-0 x 21-0
B.
W.
W.
L.C.
B.R. 11-10 x 18-2
C. C. C.
C.
B.
B.R. 11-0 x 18-4
F.
C.
C.
F.
K.
D.R. 8-2 x 11-0
C.
B.R. 10-6 x 18-2
B.
B.
W.
W.
L.C.
C.
C.
L.R. 12-10 x 21-10
F.
K.
D.A. 8-2 x 9-0
K
K
B.
B.R. 11-0 x 17-2
B.
B.R. 10-10 x 14-10
C
B.
F.
W.
C.
C.
LOBBY
L.C.
C.
C. C.
F.
VEST.
B.R. 14-0 x 18-2
L.R. 12-4 x 21-8
B.R. 10-4 x 17-2
L.R. 13-0 x 24-8
0 5 10 15 20 25

FIRST FLOOR


B.R. 14-0 x 15-0
D.A. 7-10 x 9-4
K.
L.C.
L.R. 12-10 x 21-10
L.R. 13-0 x 21-0
B.
W.
W.
L.C.
B.R. 11-10 x 18-2
C. C. C.
C.
B.
B.R. 11-0 x 18-4
F.
C.
C.
F.
K.
D.R. 8-2 x 11-0
C.
B.R. 10-6 x 18-2
B.
B.
W.
W.
L.C.
C.
C.
L.R. 12-10 x 21-10
F.
K.
D.A. 8-2 x 9-0
K.
K.
B.
B.R. 10-10 x 14-10
C.
D.A. 6-8 x 8-10
D.A. 6-8 x 8-10
B.
B.R. 11-0 x 17-2
B.
W.
F.
C. C.
F.
L.C. C.
C. L.C.
C.
F.
C. C.
C. L.C.
B.R. 11-0 x 18-2
L.R. 13-0 x 21-8
L.R. 12-10 x 21-8
D.A. 7-2 x 8-4
K
B.
B.R. 11-0 x 17-2
L.R. 13-0 x 24-8

TYPICAL FLOOR



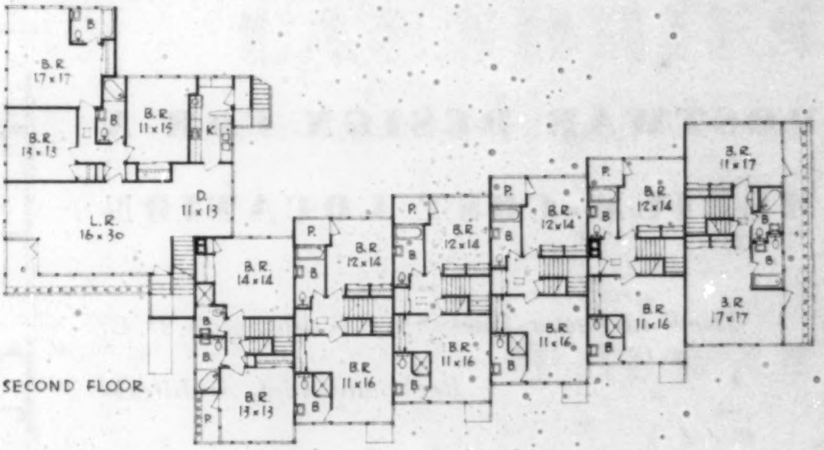
Luckhaus Studio

IMAGINATIVE VERSION OF THE ROW HOUSE

Landfair Apartments

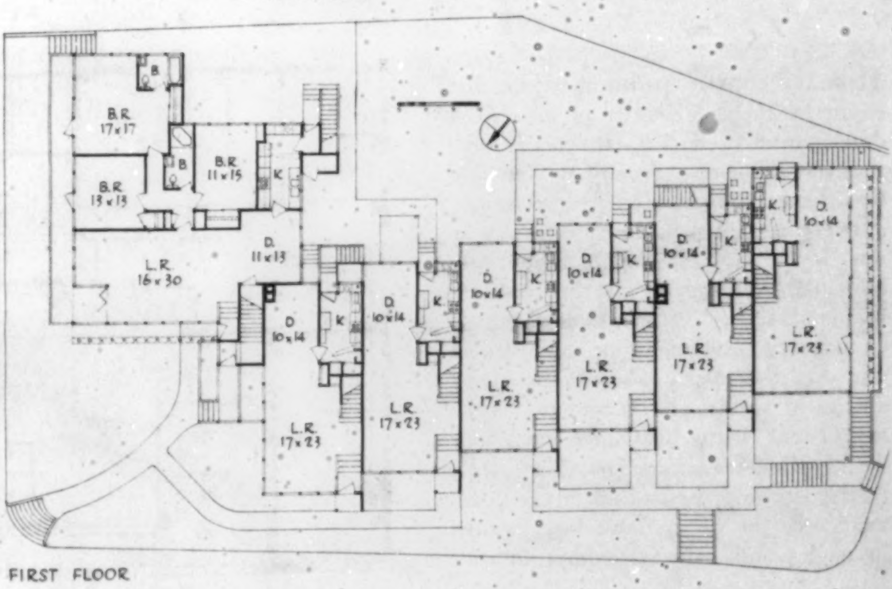
West Los Angeles, Cal.

Richard J. Neutra, Architect

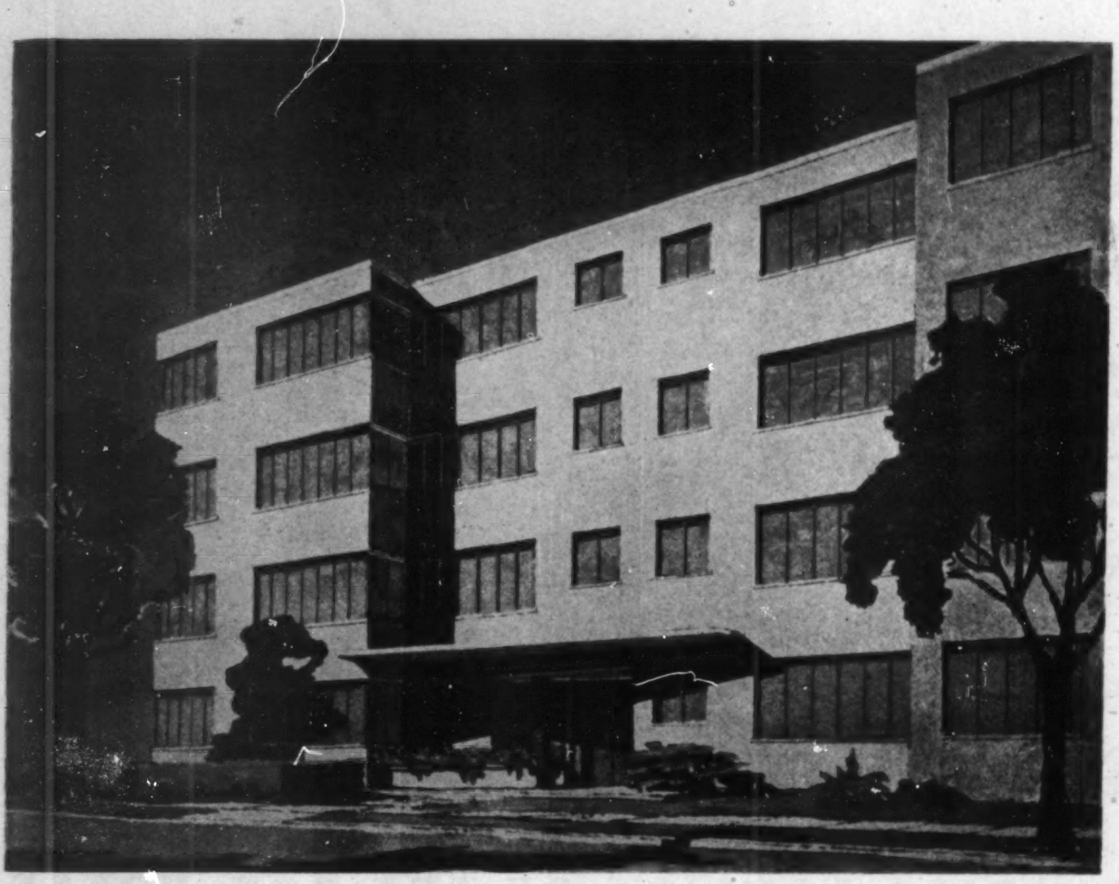

B.R. 17x17
B.R. 13x13
B.R. 11x15
K
D. 11x13
L.R. 16x30
B.R. 14x14
B.R. 13x13
B.R. 12x14
B.R. 11x16
B.R. 12x14
B.R. 11x16
B.R. 12x14
B.R. 11x16
B.R. 12x14
B.R. 11x16
B.R. 11x17
B.R. 17x17
B
P

SECOND FLOOR

Here are some of the familiar Neutra devices, which work out especially well for what is in effect a group of row houses. A far cry they are, however, from less imaginative row-type buildings of an earlier day. The problems of the narrow fronts and limited exposures are largely overcome by the full development of window areas and the staggering of fronts, also the flexibility of layout in the interiors. The sloping lot was here a complication, but actually worked out advantageously, permitting full downstairs windows.


B.R. 17x17
B.R. 13x13
B.R. 11x15
K
D. 11x13
L.R. 16x30
D. 10x14
L.R. 17x23
D. 10x14
L.R. 17x23
D. 10x14
L.R. 17x23
D. 10x14
L.R. 17x23
D. 10x14
L.R. 17x23
D. 10x14
L.R. 17x23
B

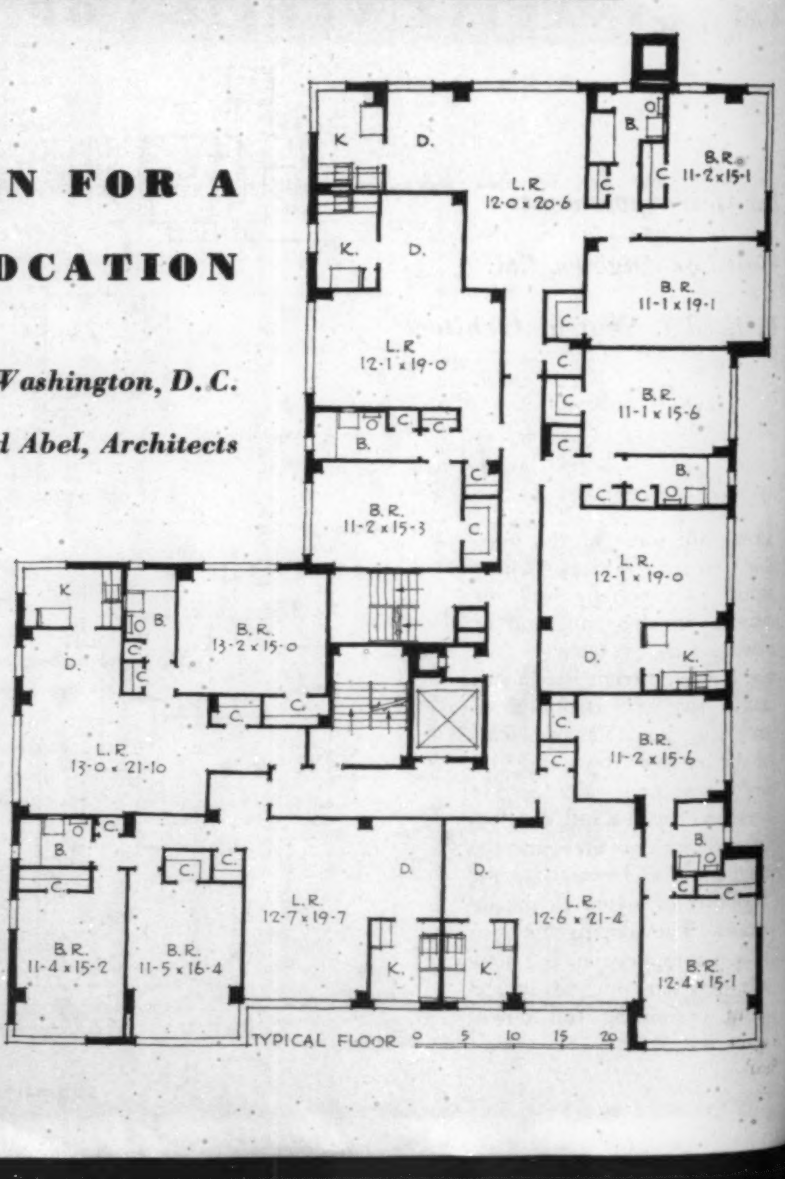
FIRST FLOOR



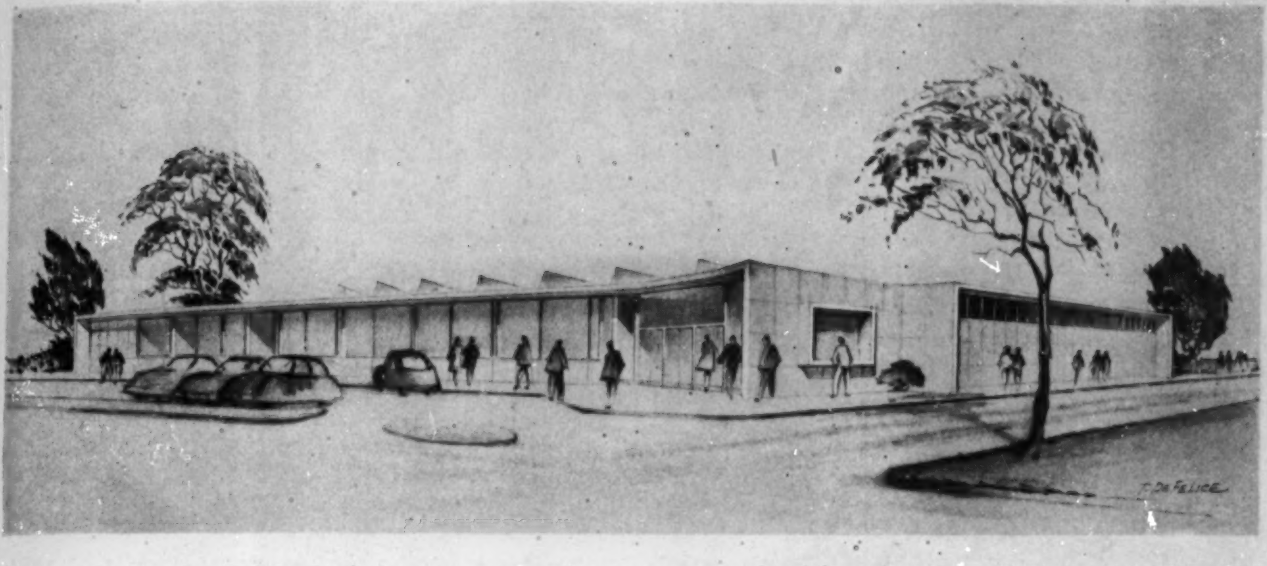
POSTWAR DESIGN FOR A MEDIUM-COST LOCATION

The Winchester-Tewksbury, Washington, D.C.

Berla and Abel, Architects


K
D.
L.R.
12-0 x 20-6
B.
C
C
B.R.
11-2 x 15-1
K.
D.
B.R.
11-1 x 19-1
C
L.R.
12-1 x 19-0
C
C
B.R.
11-1 x 15-6
C
C
C
B.
C
C
B.
B.R.
11-2 x 15-3
C
C
L.R.
12-1 x 19-0
K
B.
C
C
B.R.
13-2 x 15-0
D.
D.
K.
C.
C.
C.
B.R.
11-2 x 15-6
L.R.
13-0 x 21-10
C.
C.
B.
C.
C.
B.
D.
D.
C
C
L.R.
12-7 x 19-7
L.R.
12-6 x 21-4
B.R.
11-4 x 15-2
B.R.
11-5 x 16-4
K.
K.
B.R.
12-4 x 15-1
TYPICAL FLOOR
0
5
10
15
20

HERE is a postwar apartment scheme that might be characterized as an in-between development from the standpoint of investment economics. A walk-up building would not produce sufficient income, but a tall fireproof structure was not warranted. Therefore, it became a four-story building, requiring an elevator, but still in non-fireproof construction. Thus it escapes one building code requirement that has the effect of confusing many apartment plans in Washington — the many vent shafts that give nominally outside windows to corridors. Accordingly the layouts are clear and uncluttered, and there need not be excessive space wasted in angles and hallways within units.



POSTWAR

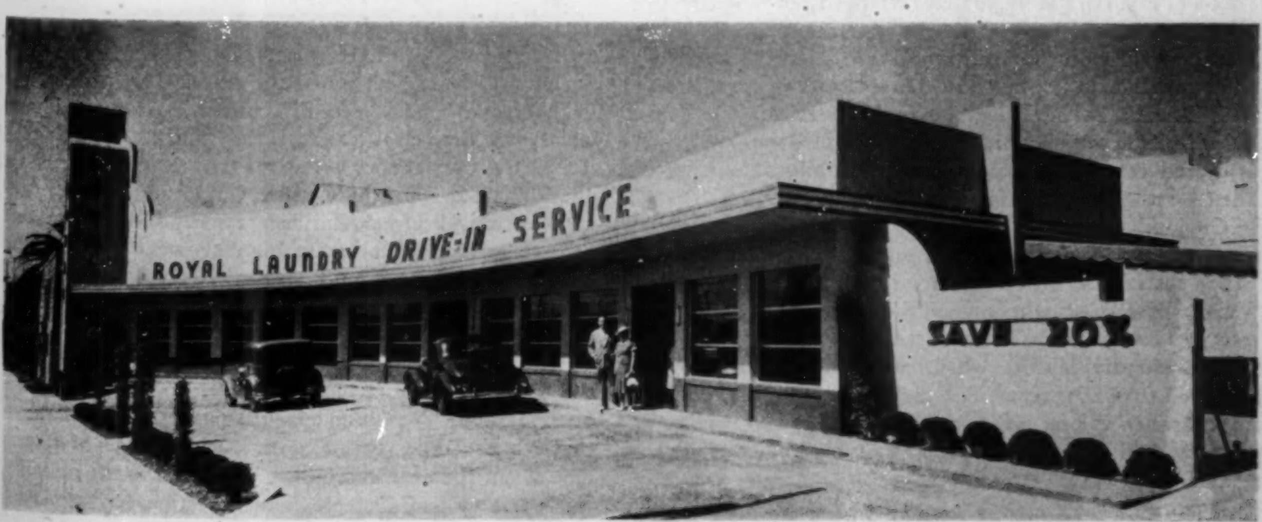
LAUNDRIES

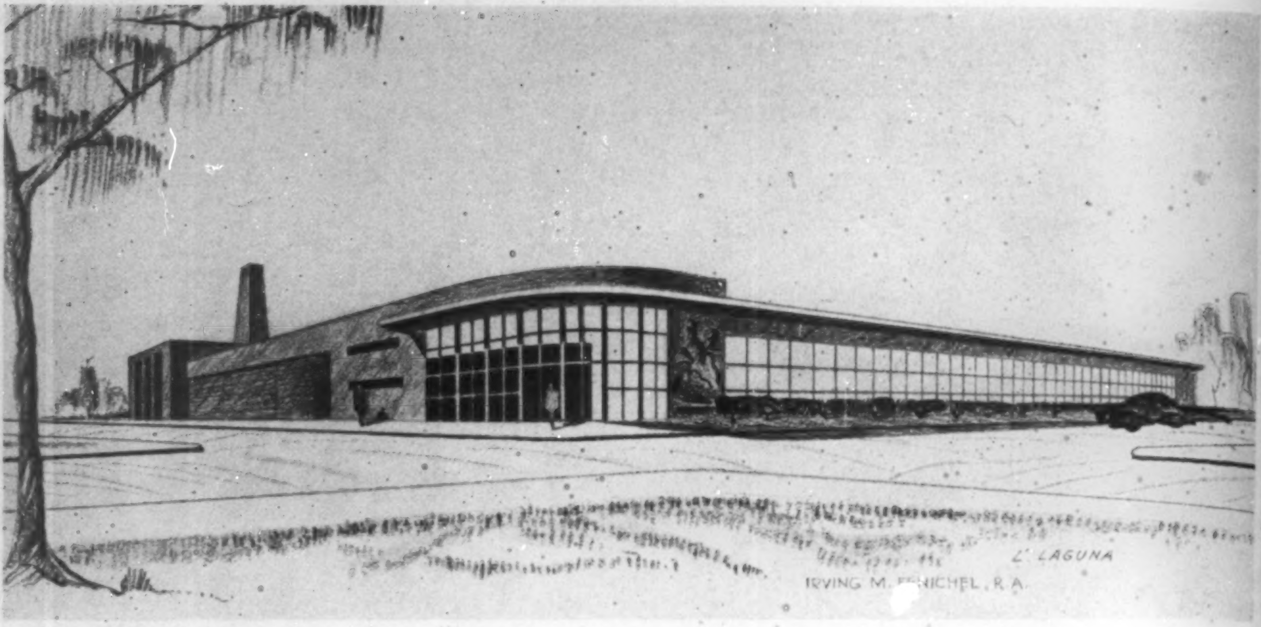
Architectural Record's Building Types Study Number 94

Design has recently become a prime factor in the success of commercial laundries. Impelled by competition, laundry operators have awakened to the merchandising advantages of buildings which attract customers as well as to business and production methods that make for better and more profitable service. "The laundry has moved 'uptown'," especially with the advent of the drive-in type of service. The laundry truck is no longer the only point of contact between customer and plant. The plant itself is its own best salesman and the housewife can now watch the spick-and-span machines at work taking away the drudgery of washday. The commercial laundry industry, conscious of competition with home laundry machines, is improving its services and methods all along the line. New types of laundry machinery, more automatic, more efficient and of greater capacity will go in the new laundry buildings and those awaiting remodeling.

Present standards and future trends in laundry design have been prepared for this study through the collaboration of Robison Heap, Irving M. Fenichel, the laundry equipment manufacturers, and the editors of *Starchroom Laundry Journal.*

PREWAR





DESIGNING THE POSTWAR LAUNDRY

*By Noel Grady**

Projects designed by Irving M. Fenichel, architect

THE ARCHITECT who would prepare the design for a smoothly-functioning and economically-operating laundry, must know what his client's plan of business is to be: the types of services he intends to produce, the manner in which he intends to produce and merchandise, and his policy of collection and delivery.

There are four basic laundry services: (1) *"Damp Wash"*—in which everything is washed, extracted, bagged, and delivered damp, ready for ironing by the housewife; (2) *"Thrifty"*—in which everything is washed and extracted, the wearing apparel is bagged and delivered damp, ready for ironing by the housewife, the flatwork is finished —sheets, pillowslips, bedspreads, tablecloths, napkins, etc., ironed on the flatwork ironer with bathtowels tumbled (hot-air dried) and separately wrapped and delivered; (3) *"Rough-Dry"*—in which the wearing apparel, after washing and extraction, is tumble-dried and delivered in that condition to be ironed at the customer's convenience, and flatwork is handled as in Thrifty service; (4) *"Finished"*—in which all articles in the bundle are ironed and delivered ready for use. Individual laundries may have their own trade-names for these services.

Obviously, the laundry owner who plans to sell all services will need more equipment and more space than one who "specializes" on one or two services. The greater the variety of services, the bigger the problem of layout to prevent back-tracking and cross-traffic.

The laundry layouts which are presented here show accepted current practice. But they are, necessarily, prewar in character insofar as machinery and services are concerned. And they are subject to possibly radical change, due to probable developments toward more automatic and efficient machinery. Also laundries may tend to specialize on particular types of service in particular localities. Some believe that Thrifty service meets the needs and buying power of the largest number of people; others that a completely-finished bundle is desired in every home.

"Rough Dry" (or "Fluff Dry"), is the most nearly automatic in production because washing, extracting ("wringing" to the layman), tumbling and flatwork ironing are done by *machines* with the assistance of workers, while such operations as bagging of damp work and finishing of wearing apparel are done by *workers* with the aid of machines. The great difference is in the productive labor cost, the laundry's biggest single expense.

Since many maintain that the laundry should offer several services in order to meet all family and buying conditions, the projected plants shown here have been designed to handle all four basic services.

The laundry, until recently, usually was located in a factory district, close to its labor supply. Beginning in the 1930's, the laundry began to move "uptown." Better locations, closer to the market, meant attractive plants with merchandising value. The property-and-building cost percentage went up but operating costs went down because of better machinery and methods. The proportion of dollars-invested to dollars-of-annual-sales went down appreciably.

The $1,000 plant has garage space for four trucks, and the $2,500 laundry (which also will produce $500 worth of drycleaning) has been given a 6-truck garage. This is considerably under the sales-per-truck average of prewar days when routes of more than $200 were in the minority. But the Office of Defense Transportation has awakened

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*Editor, *Starchroom Laundry Journal.*

laundry owners to a realization that their biggest opportunity for cost-cutting is in their collection-and-delivery department. Laundry owners know now that by gearing sales to production, converting their customers from Monday-washday habits (thus smoothing peak loads), setting up timetables of collection and delivery and zoning all routes, trucks can accommodate up to $1,000 worth of business and a reasonably-capable routeman can handle a volume of $600 to $700 weekly. The collection-and-delivery cost—second largest expense item—can be reduced greatly without impairment of service or endangering customer relations.

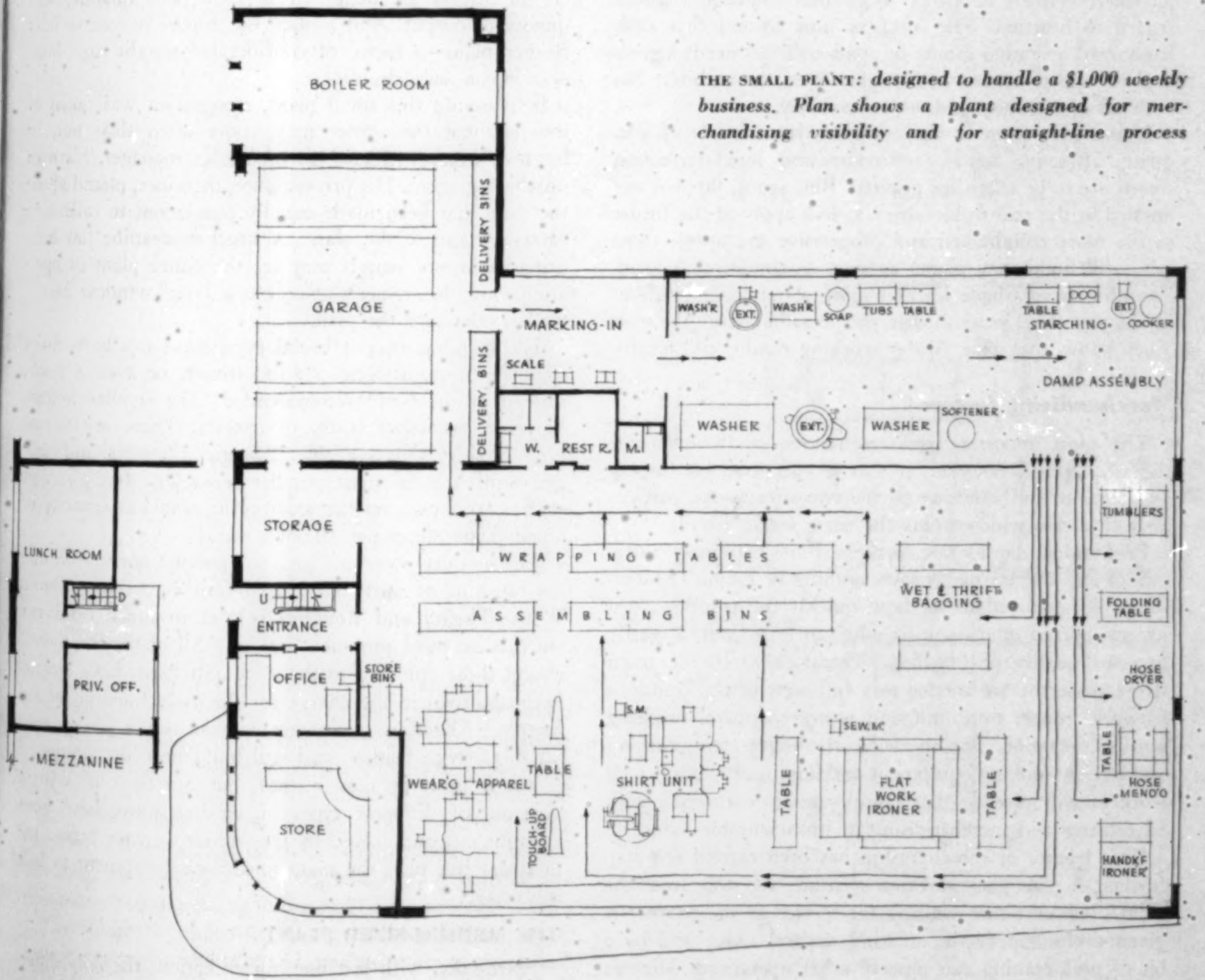
THE SMALL PLANT

The designers of this plant to handle $1,000 weekly business had several objectives in mind in making their plans. They wanted:

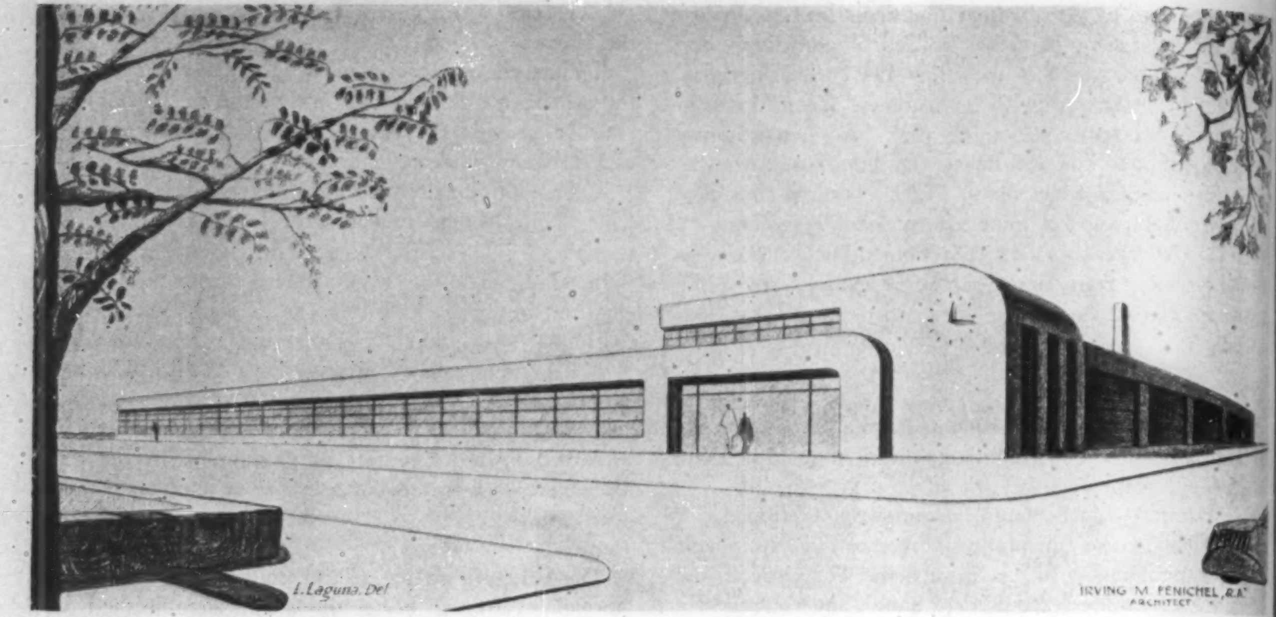
1. A laundry which would be completely equipped, yet which would make full productive use of that equipment to avoid the necessity for excess capacity. They wanted the amount of machinery required to handle the volume in a 40-hour work-week of five equal days, thus holding down the fixed costs of investment, interest, depreciation, etc.
2. To allow for future capacity expansion within the limits of the original building.
3. "Straight-line" production without back-tracking or cross-traffic.
4. Articles which received the least handling to travel the shortest distance.
5. Finished and packaged work equally convenient to the routemen's delivery bins and to the call-office counter.
6. To provide the plant's employees with comfortable and pleasant working conditions.
7. The building itself to have merchandising value.
8. The call office advantageously located on a street corner.

Incoming soiled work goes directly from the unloading platform to the marking room and straight into the damp assembly department for processing separation. "Damp Wash" bundles, and the wet portion of "Thrifty" bundles, are bagged near damp assembly and then go directly to the delivery bins. All other flow lines are around two walls and feed toward assembly and wrapping in the center. Packaged work travels but a few steps to either the routemen's delivery bins or the store bins for call-office customers.

The garage is so placed that soiled work starts its trip immediately upon being unloaded, and finished work leaves the finishing room for the delivery bins quickly and easily without crossing any other work flow. Also, the routemen can walk quickly to the office without passing through the plant proper. The storage room (for supplies) has an opening into the garage for easy unloading from delivery trucks.


BOILER ROOM
DELIVERY BINS
GARAGE
MARKING-IN
DELIVERY BINS
SCALE
W.
REST R.
M.
WASH'R
EXT.
WASH'R
SOAP
TUBS
TABLE
TABLE
STARCHING
EXT.
COOKER
DAMP ASSEMBLY
WASHER
EXT.
WASHER
SOFTENER
LUNCH ROOM
D
STORAGE
U
ENTRANCE
WRAPPING TABLES
ASSEMBLING BINS
WET & THRIFT BAGGING
TUMBLERS
FOLDING TABLE
HOSE DRYER
PRIV. OFF.
OFFICE
STORE BINS
MEZZANINE
S.M.
SEW. MC
TABLE
WEAR'G APPAREL
SHIRT UNIT
TOUCH-UP BOARD
TABLE
FLAT WORK IRONER
TABLE
TABLE
HOSE MEND'G
STORE
HANDK'F IRONER

THE SMALL PLANT: ***designed to handle a $1,000 weekly business. Plan shows a plant designed for merchandising visibility and for straight-line process***



Those points of work flow may seem elemental to the architect, and rightly so. But they are not elemental to the laundry industry. Almost every laundry has had a Topsy-like growth; new equipment seems generally to have been set wherever there happened to be space available, without regard to function. The industry now knows that such haphazard operation cannot be condoned, but needs a great deal of help in setting itself right. Thus the architect has both an opportunity and a responsibility.

It also may seem to the architect that matters of adequate, attractive toilets, restrooms and lunch-recreation rooms are to be taken for granted. But, again, this has not applied in the past to laundries. It *will* apply in the future to the more enlightened and progressive operators—those who will build new plants as soon as conditions permit. Laundry owners have learned more about labor relations in the past three years than in the 50 years before the war. They know now what "better working conditions" means.

Merchandising factors

The most important recommendation of the plan for the small plant, however, is that it puts itself on display by means of full windows on the two street sides, particularly that side which fronts the main traffic artery.

Professional laundering processes are extremely interesting, and the layman knows nothing of them. The customer is fascinated to see how quickly the laundry, with its specialized machines, is able to turn out a vastly superior quality of finishing. Therefore, from the main street, passersby are treated to a full view of the laundry's flatwork ironer, shirt unit and wearing apparel finishing units in operation. The operations themselves, the gleaming and efficient-looking equipment and busy, neatly-uniformed workers will provide that laundry at no extra cost with advertising and merchandising of immeasurable value.

This feature of showmanship has been carried one step further. A plate-glass partition separates the store from the plant. The customer waiting for service at the counter is given a close-up of the wearing apparel units, and by a bit of neck-craning can observe other operations. Minutes of waiting, that might otherwise have seemed like hours and perhaps would have generated resentment, fly by; the customer is re-sold on the laundry.

There is the additional, if intangible, point that workers on display are better workers, in both quantity and quality of output. And a plant on display is sure to be a cleaner plant—a factor of considerable weight in a business which sells cleanliness.

In planning this small plant, recognition was taken of the fact that the owner may, more often than not, be his own superintendent, his own sales manager, his own purchasing agent. His private office, therefore, placed above the store, has been made equally convenient to callers, to routemen and to the plant. A small mezzanine has been provided where visitors may see the entire plant in operation, and the owner's office has a large window in the wall overlooking the plant.

The laundry owner's initial investment can be reduced somewhat by installing a 4-roll ironer, or even a 2-roll, instead of the 6-roll recommended. The smaller ironers, however, are more costly to operate. There are several types of shirt units available. Two-girl, three-girl and four-girl units are the most popular now. One four-girl unit such as is shown on the small-plant plan has capacity of about 4,000 shirts per 40-hour week.

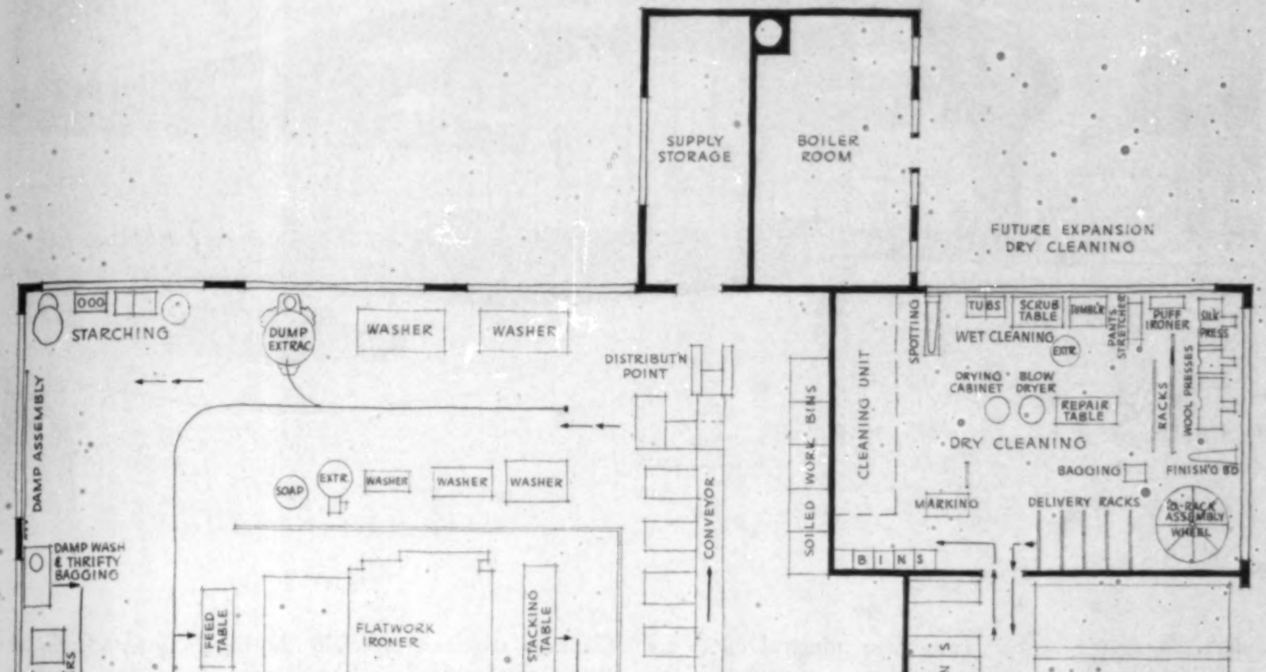
The laundry owner will have it pointed out to him that the finishing of shirts out of semi-finished services (Damp Wash, Thrifty and Rough Dry), at so much extra per shirt, is his most profitable service. (All of the fixed costs, except those applying to the shirt unit itself, have already been absorbed in the charge for the overall weight of the bundle.) Therefore this owner will put heavy selling stress on this service feature, and will build his shirt volume.

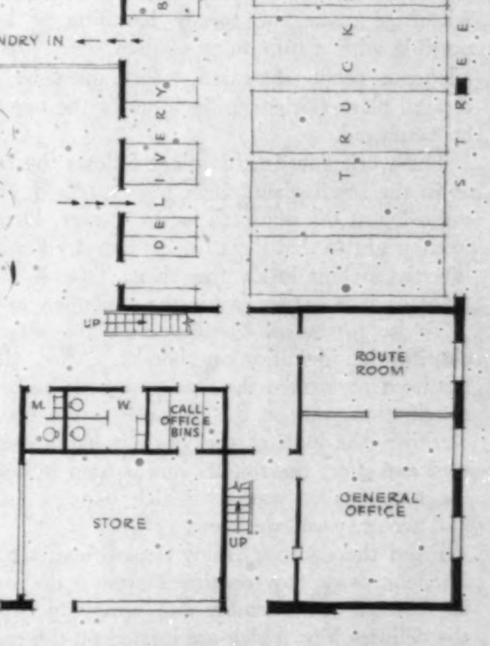
But it must be remembered that questions of relative volumes of different types of services must have been thought out and solved by the laundry owner before the architect can plan the plant and place equipment to best advantage.

THE MEDIUM-SIZED PLANT

Essentially, with just one big exception, the only differ-

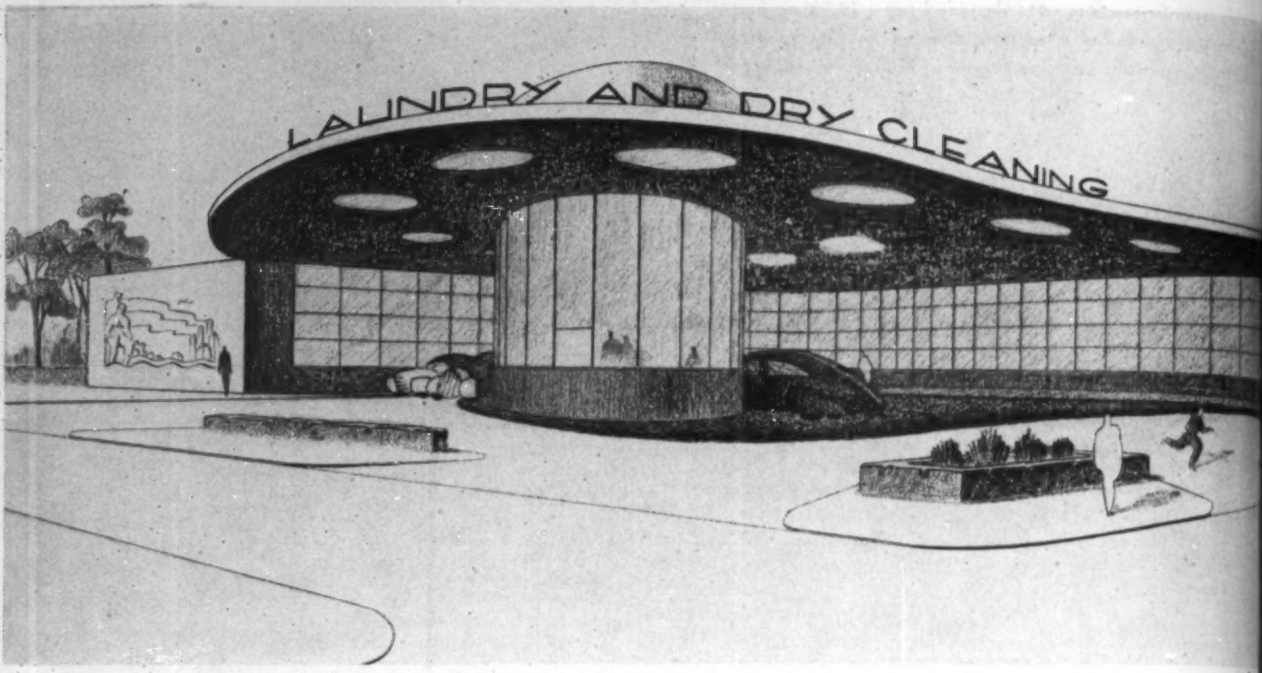
THE MEDIUM-SIZED PLANT: *designed for a $2,500-a-week business. Includes a section devoted to drycleaning and incorporates improved types of laundry machinery*


SUPPLY STORAGE
BOILER ROOM
FUTURE EXPANSION DRY CLEANING
STARCHING
DUMP EXTRAC
WASHER
WASHER
DISTRIBUTN POINT
DAMP ASSEMBLY
SOAP
EXTR.
WASHER
WASHER
WASHER
DAMP WASH & THRIFTY BAGGING
TUMBLERS
FEED TABLE
FLATWORK IRONER
STACKING TABLE
CONVEYOR
BLANKET FINISHER
CURTAIN FRAMES
SUPT. OFFICE
TABLE
PRESS
COLLAR FINISHING
TABLE
TABLE
TABLE
SOCK DRYER
SOCK REPAIR
TABLE
HANDKF IRONER
TABLE
3 WEARING APPAREL UNITS
SHIRT UNITS
2-GIRL
4-GIRL
SOILED WORK BINS
CLEANING UNIT
SPOTTING
TUBS
SCRUB TABLE
TUMBLER
PANTS STRETCHER
PUFF IRONER
SILK PRESS
WET CLEANING
EXTR.
DRYING CABINET
BLOW DRYER
REPAIR TABLE
RACKS
WOOL PRESSERS
DRY CLEANING
BAGGING
FINISH'G BD
MARKING
DELIVERY RACKS
12-RACK ASSEMBLY WHEEL
BINS
LAUNDRY IN
DELIVERY BINS
SORTING BINS
TRUCKS
STREET
UP
ROUTE ROOM
M.
W.
CALL-OFFICE BINS
STORE
UP
GENERAL OFFICE


PRIVATE OFFICE
DN TO PLANT
TO STREET
LUNCH ROOM
WOMEN'S LOCKERS
MEN'S LOCKERS
SECOND FLOOR

ence between this plant and the small plant previously discussed is the size. The big exception is the drycleaning department which has been included. Otherwise, the same objectives have been realized—balanced equipment, expansion possibilities, streamlined production, expedited handling of services, convenient arrangement of departments, good working conditions, and a plant with advertising and merchandising value.

The volume intended for this plant has justified certain improvements in character of equipment over the small



plant. Automatic washers (the three principal ones) are here justified. A dump-type extractor is worthwhile. An automatic folder has been indicated on the flatwork ironer. All these make the speedy handling of larger volume possible with a minimum of manpower. To maintain an adequate profit, increased wages must be offset by increased plant efficiency. Machines of the newer types must be employed.

The work flow in this plant follows the same principle as in the small plant previously described. Soiled work is unloaded at the platform in the garage. Drycleaning goes to the right to that department; laundry bundles are taken directly to bins inside the plant. That is as far into the plant as it is necessary for the routemen to go.

To be processed, bundles cross the aisle to the four classification-identification booths. After that operation has been performed the work proceeds by conveyor to the distribution point at the entrance to the washroom. After washing, the bulk of the work is handled by the dump-type extractor; the smaller one is used in connection with the two smaller washers which handle "fugitives," silks and wools, wash-overs, etc.

From the damp-assembly department, which is next in line, the work flow continues around the walls, progressing toward the assembly and wrapping department near the delivery bins which are located on the garage platform and equally close to the bundle shelves at the store.

Two additional laundry services have been provided in this medium-sized plant: blankets and curtains. These are washed in the washroom, but require special finishing equipment. Specialty services of this kind are desirable in any laundry where the added investment is permissible and space can be made available.

The Drycleaning Department

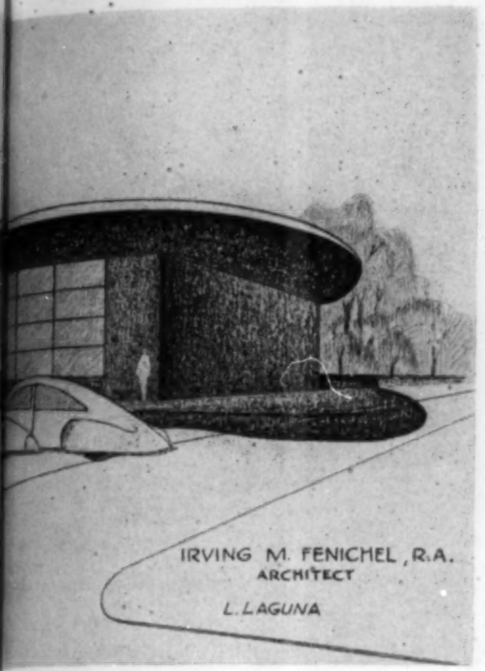
Until the depression, such allied textile maintenance services as drycleaning, rug cleaning, fur cleaning and storage, and the like, were left to other renovators who dealt exclusively in one service. Then a large number of laundry concerns, especially the bigger ones, adopted all sorts of the sidelines. Drycleaning, more than anything else, kept laundries operating; it not only overcame the laundry losses but actually provided extra profit besides. So drycleaning departments are now accepted as an integral and logical part of laundry operation. At least one-third of the laundries in this country have them; authorities in that field predict conservatively that at least half will have them immediately after the war. The plans for our model medium-sized laundry therefore include a drycleaning department.

In the average laundry which operates routes and depends upon route salesmen for its volume, drycleaning has produced from 10 to 15 per cent of the total sales. Thus, this plant, designed to produce $2,500 worth of laundry per week, has been given a drycleaning department to handle a weekly volume in that service of $500, at base prices of 75 cents for men's suits and $1 for ladies' dresses.

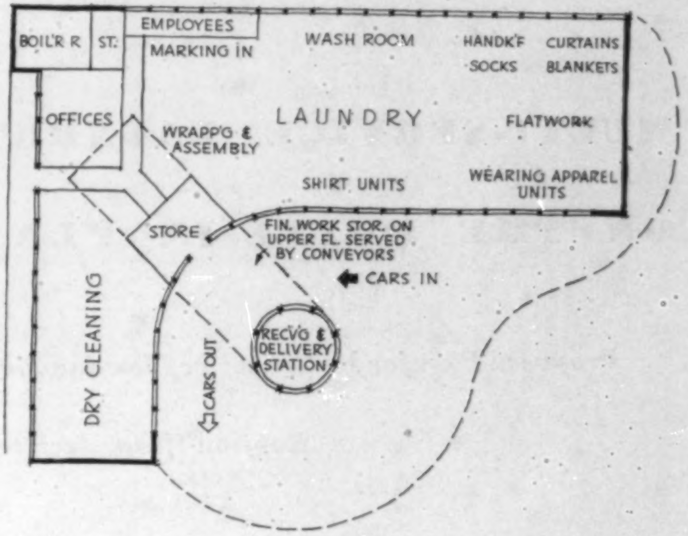
This drycleaning department has been laid out in such a manner that the $500 volume can be handled by four employees. But even if five were used, and all were paid top wages for that kind of work, the productive payroll percentage would not exceed 40 per cent of sales. This is unusually low and, in addition, it happens in this instance to include the cost of superintendence. (One man serves as drycleaner, spotter, wetcleaner and superintendent.) The department, under those conditions, could be expected to return a net profit of at least 20 per cent, and it easily might be higher.

The architect will be impressed with the fact that in an area 26 by 40 feet, one-fifth as much volume can be handled as in the entire laundry. The income per square foot of floor space is markedly higher in a drycleaning department, and the machinery investment per-dollar-of-annual-sales is less than half of that required for the laundry.

It is anticipated that this plant will generate its own electricity, as at this volume of business there might well be an appreciable saving over purchased power.



THE DRIVE-IN LAUNDRY: *suggestive of the development of a current trend. Employs new servicing techniques for rapid and accurate customer service*



DRIVE-IN LAUNDRY

This plant has been designed to handle a volume of $2,500 per week in laundry work and $1,000 per week of drycleaning. Unlike the small and medium-sized plants already described, this laundry will handle only two laundry services: Rough Dry and Finished. ("List Work"—bachelor bundles—are included in the latter.) Damp Wash and Thrifty services have been eliminated here because each is returned to the customer either entirely or partially damp, and since the Drive-In has no control over the timing of customers' calls for their bundles, the damp services are impractical.

The Drive-In laundry depends entirely on customers who bring their bundles to the plant, and call again to pick it up when finished. No regular delivery trucks are operated.

The drive-in plant shown in the perspective and diagrammatic plan incorporates all of the features essential to successful operation of such a business, accessibility, attention-arresting design, visability of operations, expediting equipment and methods, cleanliness, and efficient laundry machinery. It shows a possible development not an actual project, and incorporates several unique features.

As more and more drive-ins enter the field, the service will lose the novelty which was responsible in some degree for the amazing progress which its pioneers enjoyed. A bigger sales and merchandising burden will be placed upon the building itself, and upon the manner in which that building contributes to speedier, more convenient service.

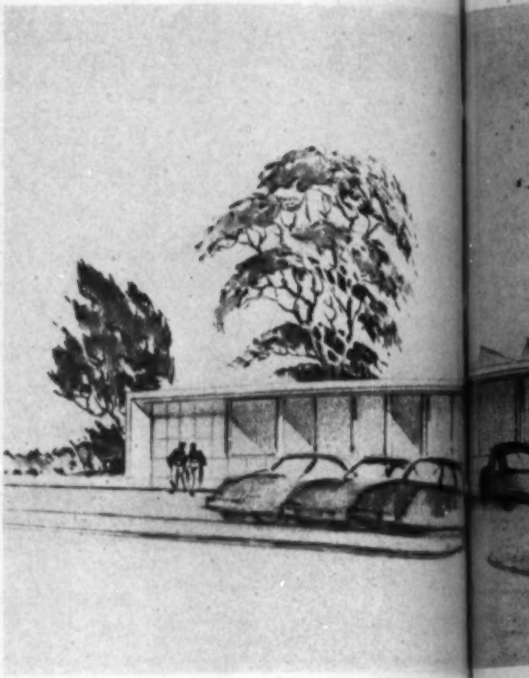
It is assumed that "service boys" will be employed to meet the customers' cars as they enter the parking area. Incoming soiled work will be deposited in the circular station—or at the store. In either case, the bundles are conveyed—first vertically, then horizontally, and finally by chute—to the laundry or drycleaning marking-in departments, to be processed in the normal routine.

Laundry work feeds from the center of the plant toward the outside walls where, after finishing, it is placed on a belt conveyor to be transported to the assembly and wrapping department. Following that operation it is conveyed to the second floor package room to await the customers' call. Drycleaning receives similar handling.

The delivery or package room has direct communication (pneumatic tube, telephone, loud speaker, or telautograph) with the parking area. A service boy will meet the customer and will relay the necessary information and instructions. At the dispatching point in the delivery room it is possible to chute the work to the service boy and customer.

The whole procedure, from the moment the customer's car drives in until it is on its way again, should not take longer than two minutes. A much shorter interval is possible if the delivery personnel is properly organized and trained.

If possible, allowance should be made for the eventual addition of a fur storage vault to the left of the dry-cleaning department. The service is usually very profitable. Laundry-drycleaning operators have found that "no one has yet built a fur storage vault big enough the first time."



MULTI-SERVICE LAUNDRY ON THE DRIVE-IN PLAN

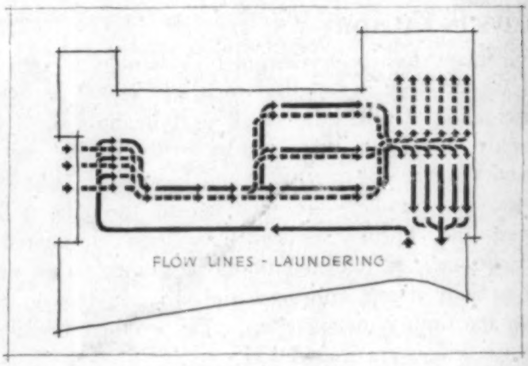
Proposed Plan for Multi-Service Cleaning Plant

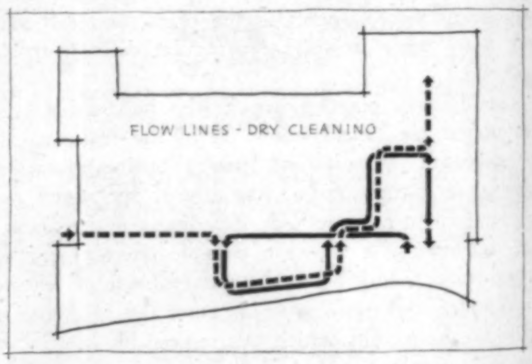
Robison Heap, Architect

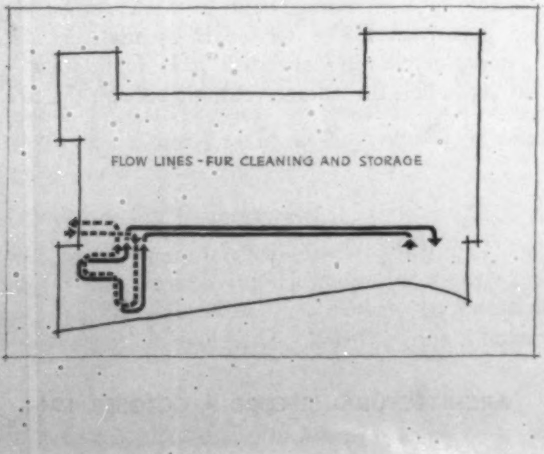
THIS DESIGN contemplates a laundry and cleaning business deriving the major part of its volume from collection and delivery routes but organized also for drive-in service. For the convenience of drive-in customers, the plant is located on the city-bound side of a traffic artery connecting a middle-class residential area with the business center, and ample parking facilities are provided. Because laundry owners' experience indicates that a substantial portion of cash-and-carry laundry bundles are not called for promptly, the finished bundle storage racks are sufficient to hold a week's work load.

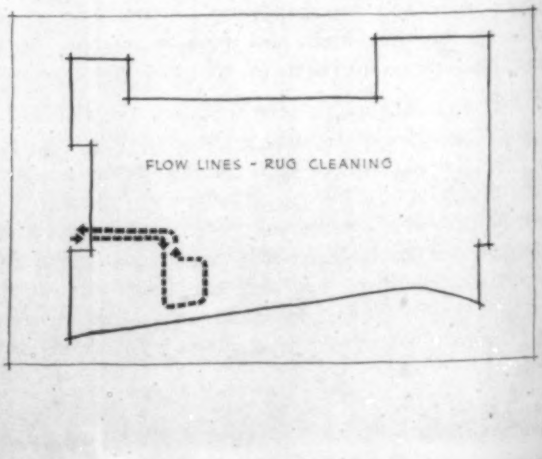
Flow of work for the various cleaning services is indicated in the adjoining diagrams. A wide aisle leading directly from the call office counter to each of the production departments permits rapid and efficient routing of bundles left by customers.

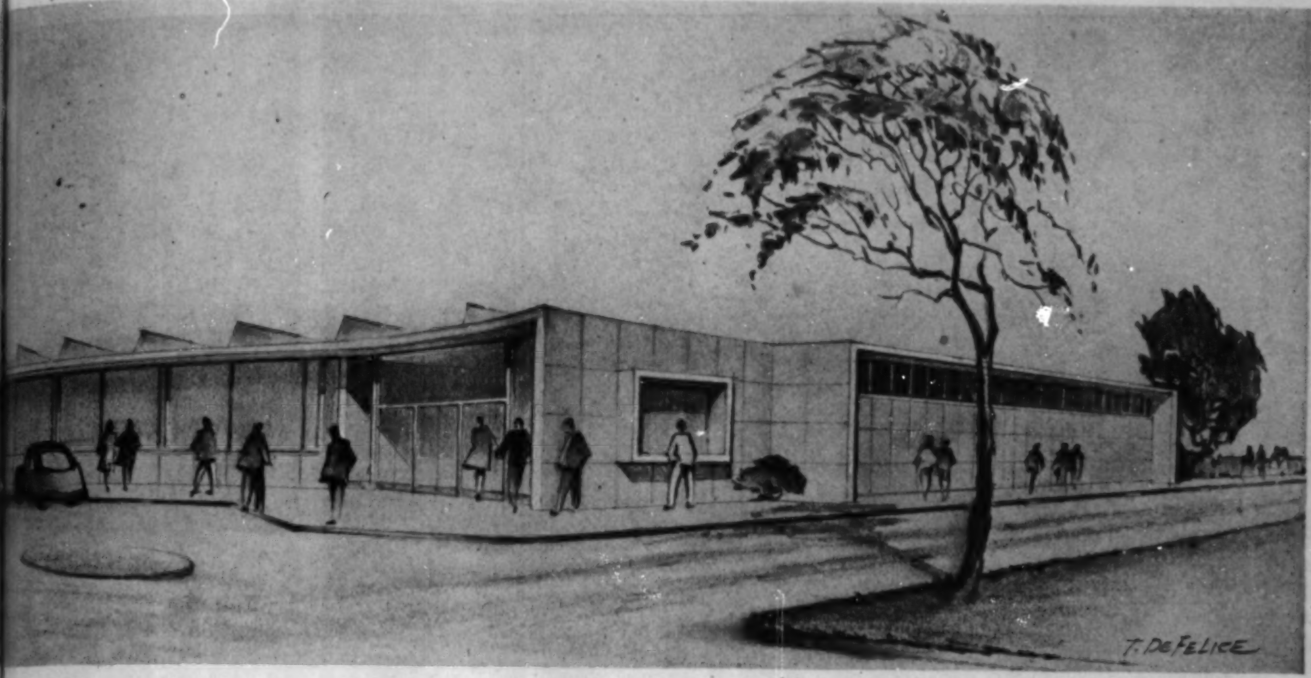
The plant is designed primarily for laundering, the floor area for this type of service being 7,600 sq. ft. The dry cleaning work area is placed on the street side where large windows permit the interesting finishing processes to be seen by the public. The rug cleaning department is of ample size to permit two operators to process 50 9 x 12 rugs per week. The fur storage vault has a capacity of 3,000 garments and in addition includes racks for the storage of 100 to 125 rugs. Saw-tooth sky lighting and exhaust fans provide light and ventilation.

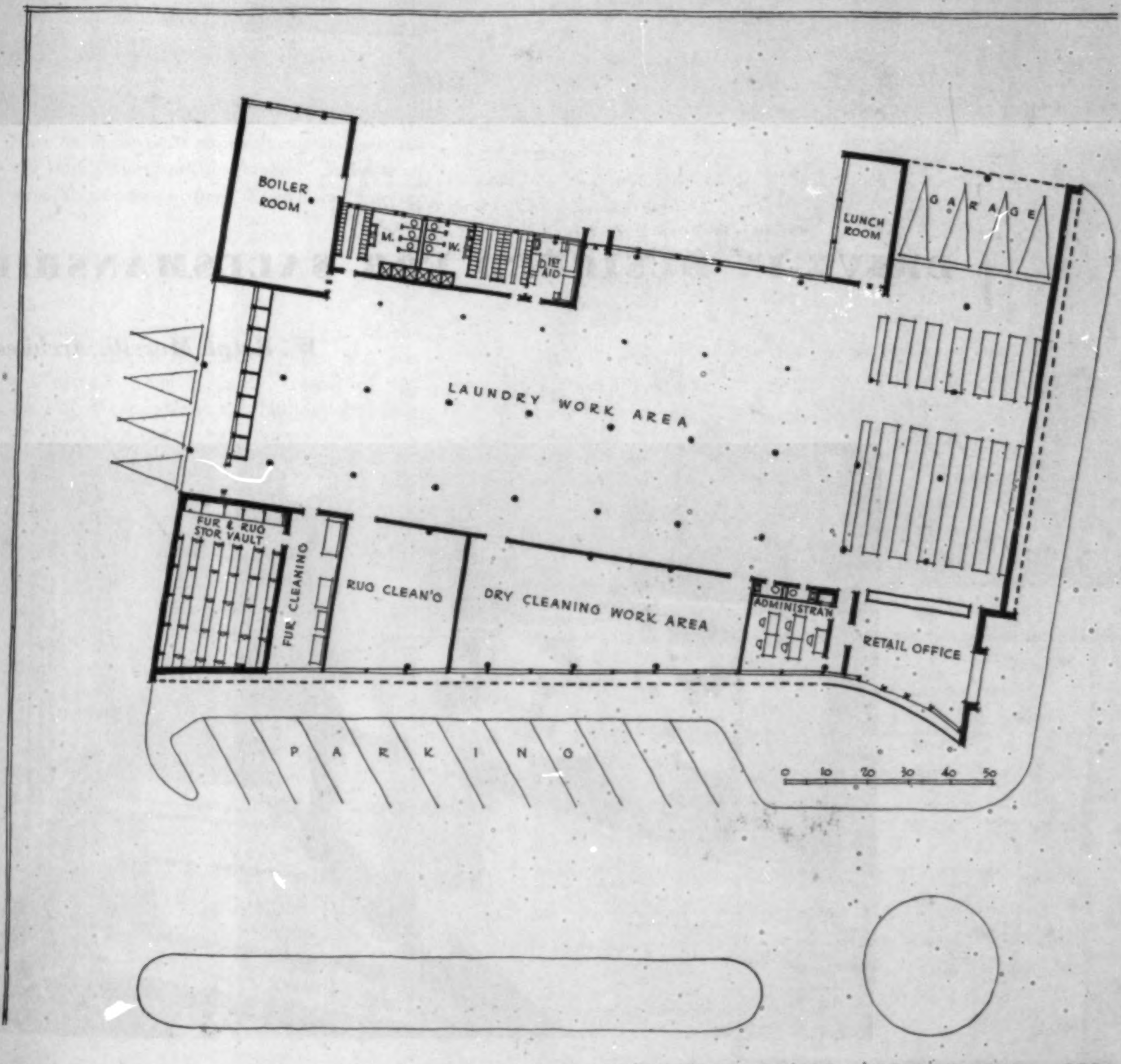


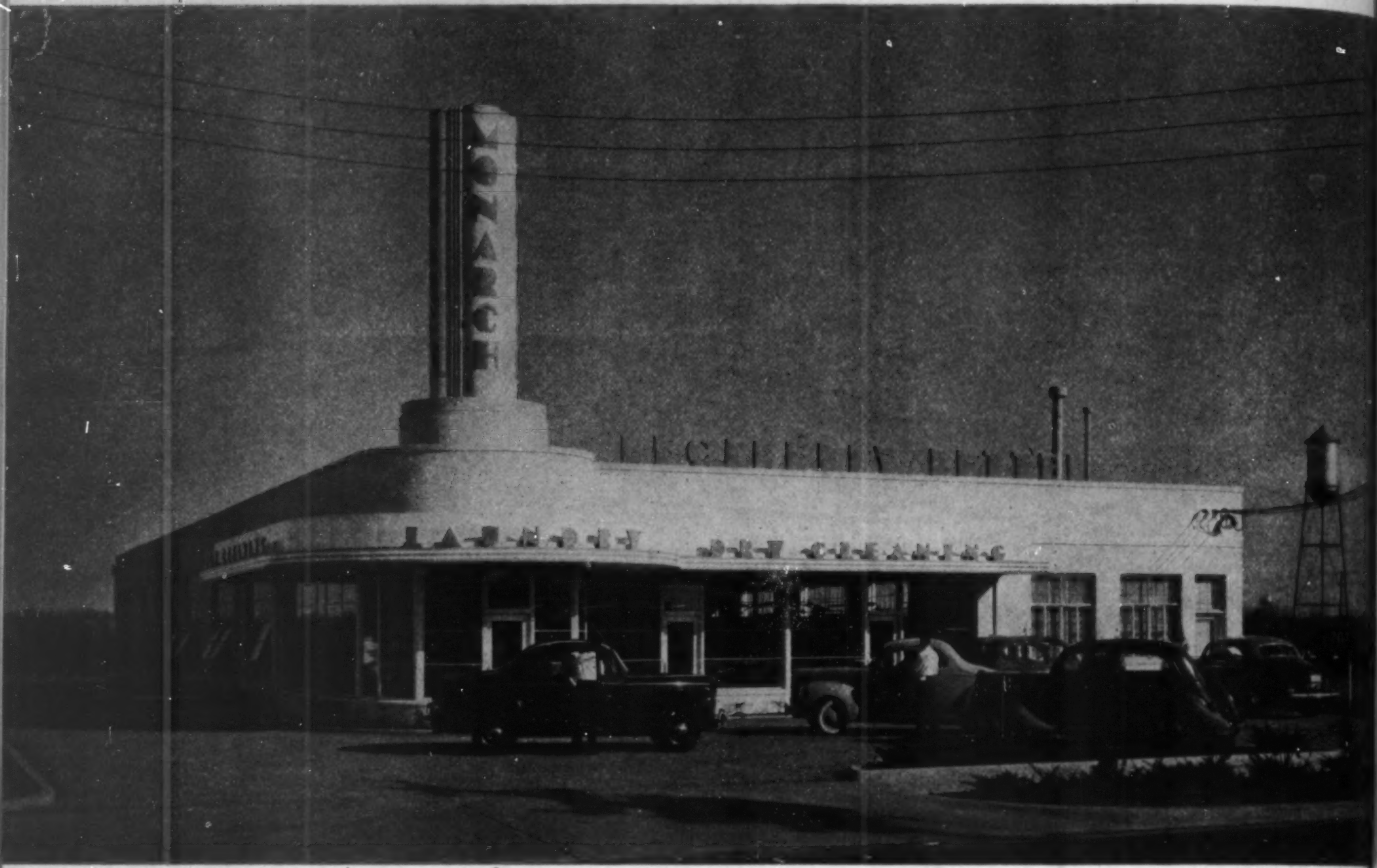






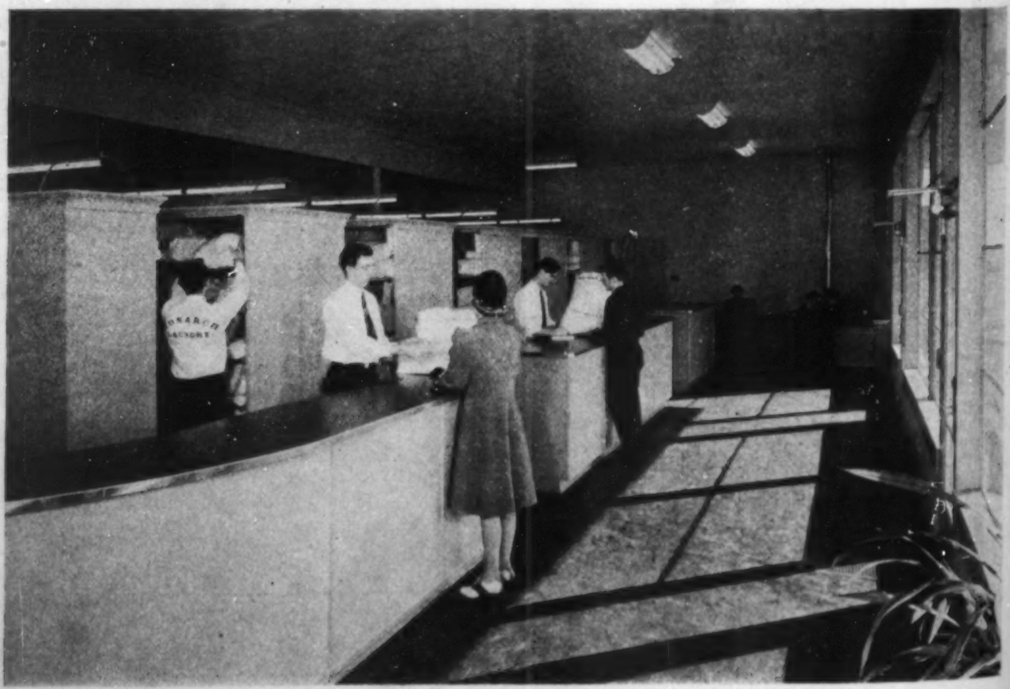

T. DeFELICE

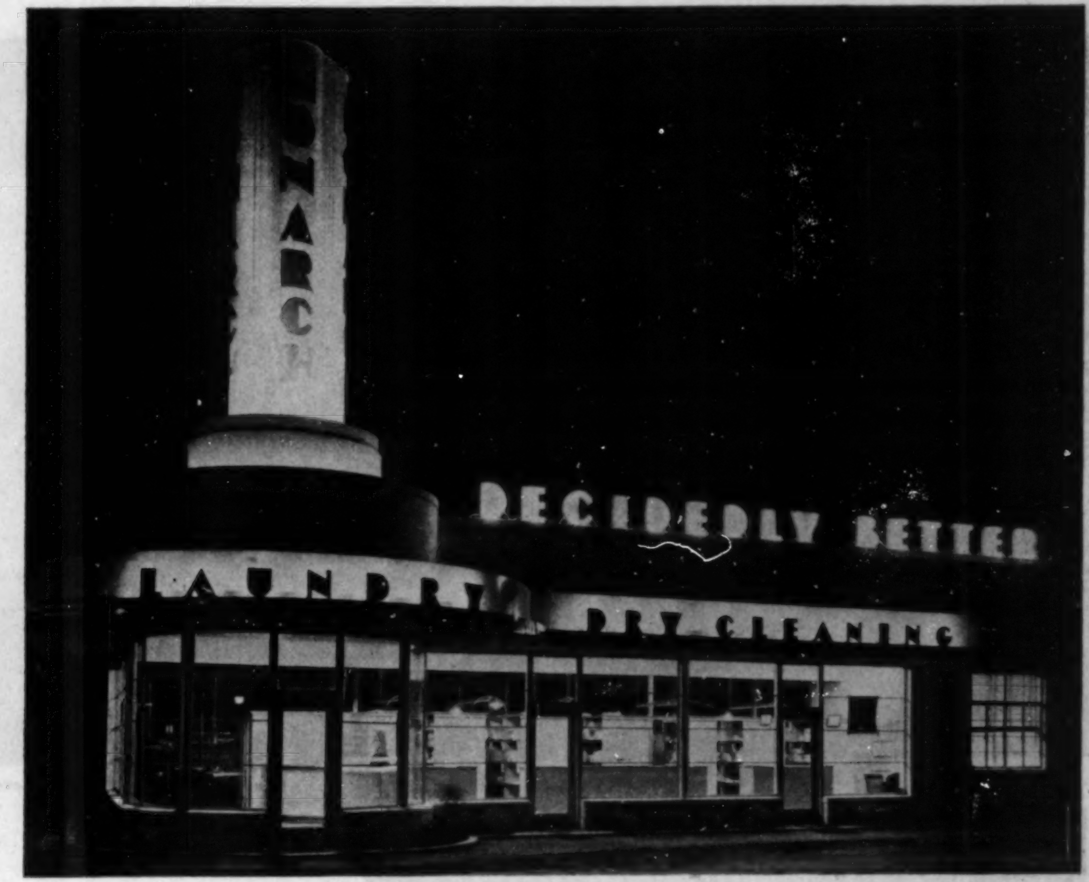

BOILER ROOM
M.
W.
1ST AID
LUNCH ROOM
GARAGE
LAUNDRY WORK AREA
FUR & RUG STOR VAULT
FUR CLEANING
RUG CLEAN'G
DRY CLEANING WORK AREA
ADMINISTRAN
RETAIL OFFICE
PARKING
0 10 20 30 40 50


MONARCH
LAUNDRY
DRY CLEANING

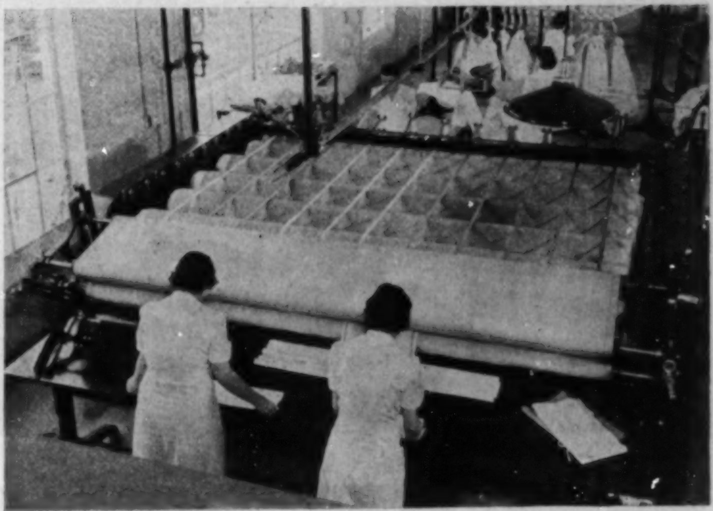
DRIVE-IN DESIGNED FOR SALESMANSHIP

W. Ralph Merrill, Architect




MONARCH
DECIDEDLY BETTER
LAUNDRY
DRY CLEANING

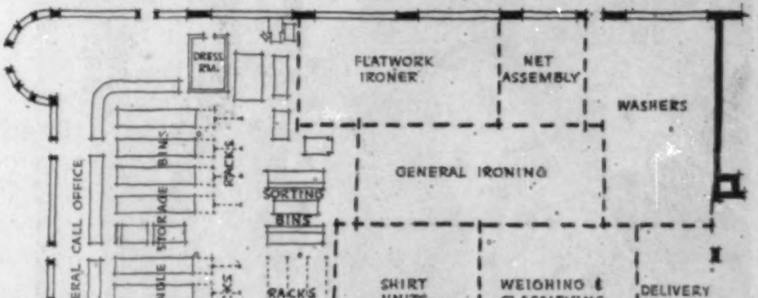
Since laundries must attract customers just like any store, "merchandising appeal" becomes of prime importance in both exterior and interior



Monarch Laundry, situated in one of the exclusive suburbs of Dallas, Texas, is a prewar drive-in that is fairly typical of the problem of designing the laundry building for merchandising attractiveness.

General planning of the building was flexible, allowing for considerable expansion. Since it was a pioneering venture it was designed for either drive-in or delivery type service. While many of the drive-ins specialized in laundry service only, Monarch's additional dry cleaning service may be typical of postwar service. Large glass areas present an advertising medium, as well as providing ample light and ventilation for the employees.

Cash-and-carry service, of which Monarch Laundry is an example, was once believed to have its greatest possibilities in the south and west where automobiles are used for daily transportation and the weather is favorable. However, drive-in service is finding increased favor with laundry owners in the northern states and in Canada, and it is anticipated that after the war many more of this type will appear throughout the country.


DRESS RM.
FLATWORK IRONER
NET ASSEMBLY
WASHERS
GENERAL IRONING
SORTING BINS
RACKS
BUNDLE STORAGE BINS
GENERAL CALL OFFICE
RACKS
RACKS
SHIRT UNITS
WEIGHING & CLASSIFYING
DELIVERY
PRIVATE OFFICE & TOILETS
RACKS
GARMENT PRESSING

Courtesy American Laundry Machinery Co.

Above: The wearing apparel and finishing unit. At Left: The shirt pressing unit arranged for maximum convenience and production—note also the piping system for the various type presses

Dry cleaning arrangement in this laundry has been planned for the operators' ease, ample room has been allowed for both pressing operations as well as for handling of finished work

LAUNDRY EQUIPMENT

GENERAL REQUIREMENTS
These data on laundry equipment are flexible and may form the basis of planning for any size of commercial laundries.

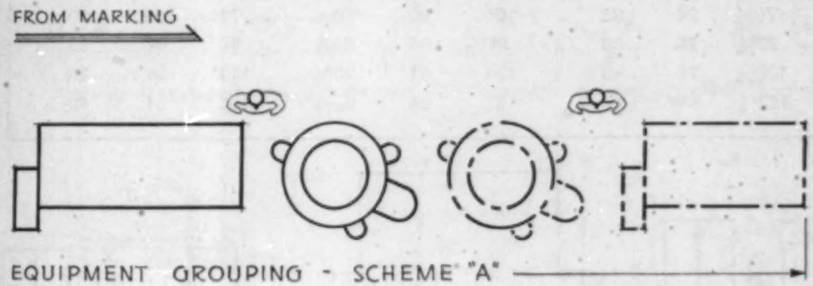
Certain basic machine groupings will appear in almost every laundry; these include: washing and extracting, two operations that are carried on almost simultaneously, the washers and extractors usually being adjacent; tumbling, a process for further drying material, and for fluffing out such items as towels and wash cloths; flatwork ironing, for pressing sheets and table cloths; wearing apparel pressing, which will include pressing of slacks, dresses, etc.; and shirt pressing.

While typical sizes for the larger manufacturer's equipment have been shown in the tables, they represent only a small portion of the total number of types available. Detailed information may be had directly from manufacturers.

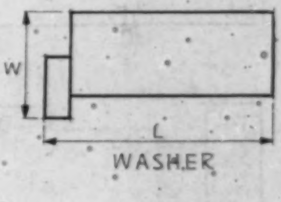
WASHER SIZES AND LOAD CAPACITIES

Mfgrs. Size	Nominal Capacity	AMERICAN			HOFFMAN			TROY			PROSPERITY*		
	lb/hr	L	W	H	L	W	H	L	W	H	L	W	H
36x36″	110	61	44	71	85½	50⅝	68	58	54	63	61	50	72
42x36″	225	77¼	60⅛	75	69	60½	80	58	59	69	..	..	..
42x72″	300	113¼	60⅛	75	105	60½	81	96	59	69	61	77	79
42x96″	400	137¼	60⅛	75½	129	60½	81	120	59	70	..	..	..

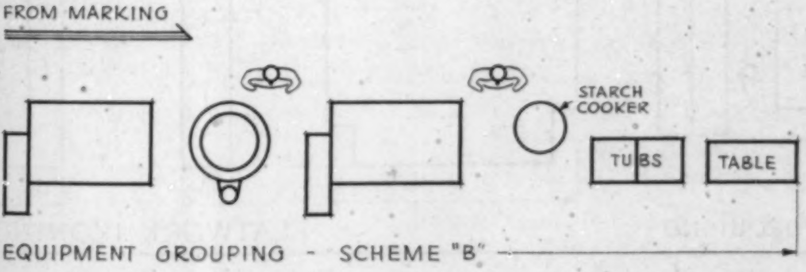
* "Prosperity" is end-door washer; others side feed.



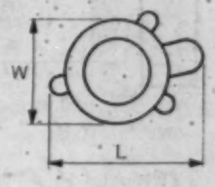
EQUIPMENT GROUPING - SCHEME "A"



WASHER



EQUIPMENT GROUPING - SCHEME "B"



EXTRACTOR

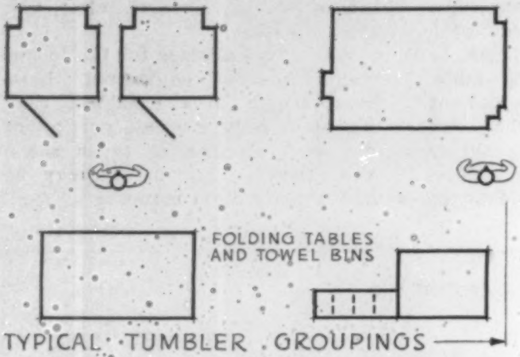
NOTE - SCHEME "A" OR SCHEME "B" MAY BE USED SEPARATELY OR IN COMBINATION.

WASHING & EXTRACTING

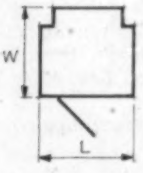
EXTRACTOR SIZES AND LOAD CAPACITIES

Mfgrs. Size	Nominal Capacity	AMERICAN			HOFFMAN			TROY		
	lb/hr	L	W	H	L	W	H	L	W	H
20″	25	46	29	44¼	40⅝	28	43¼	42	28	39
26″	50	57½	36½	51	51⅜	36	45	54	36	40
30″	70	60½	39	51	56½	40½	49	63	41	44
40″	175	80¾	47⅜	51	71	55	35	74	57	45

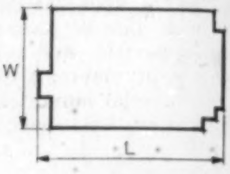
LAUNDRY EQUIPMENT



TYPICAL TUMBLER GROUPINGS



OPEN END TUMBLER

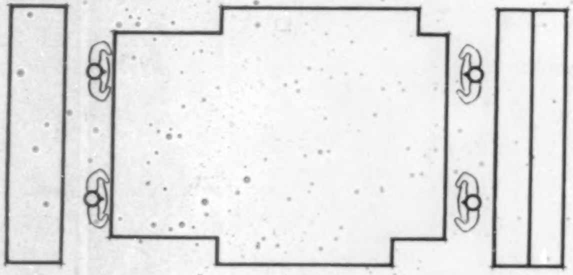


SIDE FEED TUMBLER

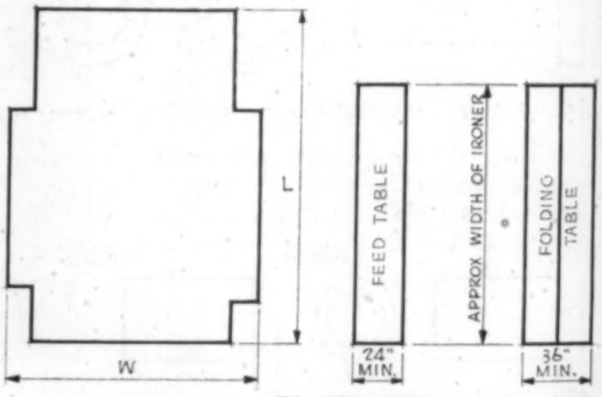
TUMBLING

TUMBLER SIZES AND LOAD CAPACITIES

Mfgrs. Size	Nominal Capacity	AMERICAN			HOFFMAN			TROY		
	lb/hr	L	W	H	L	W	H	L	W	H
18" open end	20	38	42	77	49	42¼	78	38	39	70
24" open end	30	44	42	77	55	42¼	78	44	39	70
30" open end	40	50	42	77	61	42¼	78	50	39	70
40" side feed	60	70¼	94	83	104	60	90	79	54	90
60" side feed	100	90¼	94	83	94⅛	64	80⅜	90	54	90
90" side feed	150	120¼	94	83	124	64	80⅜	113	54	90
120" side feed	200	152¼	94	83	157	64	80⅜	161	54	90



TYPICAL FLATWORK IRONER GROUPING



FLATWORK IRONING

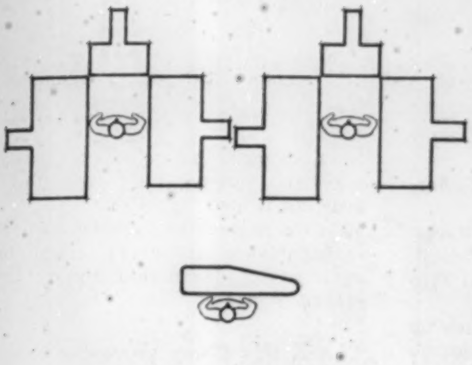
FLATWORK IRONER SIZES

Mfgrs. Size		AMERICAN			TROY			PROSPERITY*		
		L	W	H	L	W	H	L	W	H
2 Roll	100	54	140	52	73½	116½	54⅛	159	122	61
4 Roll	100	145	144⅜	54⅜	111½	116½	61¾	159	170	61
	110	145	155⅜	54⅜	—	—	—	183	170	61
	120	145	165⅜	54⅜	131½	136½	71¾	211	170	61
6 Roll	100	176¾	144⅜	54⅜	181	161	64	159	218	61
	110	176¾	155⅜	54⅜	181	171	64	183	218	61
	120	176¾	165⅜	54⅜	181	181	64	211	218	61

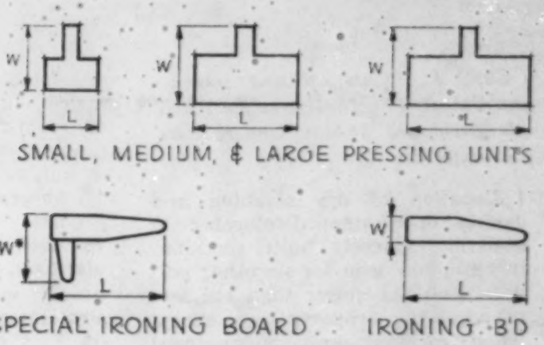
*"Prosperity" sizes are for 108", 132", and 160" ironers.

2 Roll Hoffman 100" ironer is 140"x52"x54".

LAUNDRY EQUIPMENT



TYPICAL WEARING APPAREL GROUPING

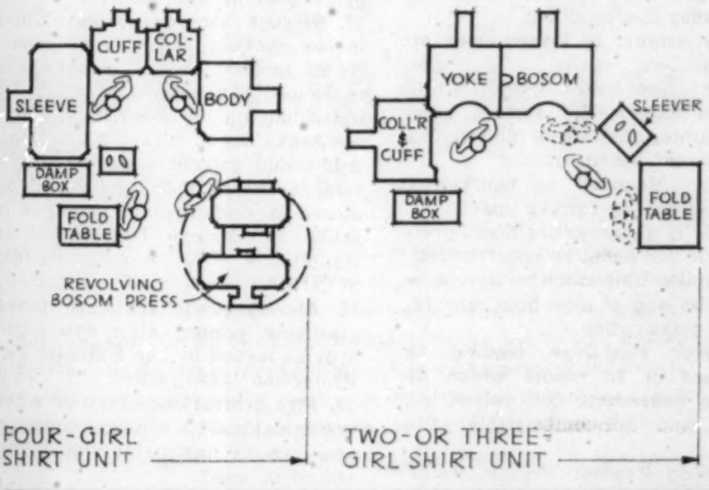

W
L
SMALL, MEDIUM, & LARGE PRESSING UNITS
W
L
SPECIAL IRONING BOARD
IRONING B'D

WEARING APPAREL PRESSING

WEARING APPAREL PRESS SIZES

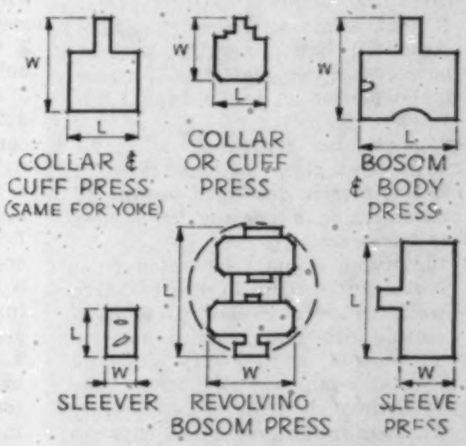
Unit	AMERICAN			HOFFMAN			TROY			PROSPERITY		
	L	W	H	L	W	H	L	W	H	L	W	H
Small	30¼	35⅛	52¾	28	49¾	56	26	34	55	30	29	50
Medium	58	45¾	62	58	47	60	60	44¾	55	30	33	50
Large	63½	45¾	61¾	64	47	60	64	44¾	55	64	40 7/16	60
Ironing Bd.	60	16	31	55½	16	31	66	16	31	60	24	30½

Special Ironing Board—add about 24" to width dimension given above.


CUFF
COL-LAR
SLEEVE
BODY
DAMP BOX
FOLD TABLE
REVOLVING BOSOM PRESS
YOKE
BOSOM
COLL'R & CUFF
SLEEVER
DAMP BOX
FOLD TABLE

FOUR-GIRL SHIRT UNIT

TWO-OR THREE-GIRL SHIRT UNIT


W
L
COLLAR & CUFF PRESS (SAME FOR YOKE)
COLLAR OR CUFF PRESS
BOSOM & BODY PRESS
SLEEVER
REVOLVING BOSOM PRESS
SLEEVE PRESS

SHIRT PRESSING

SHIRT PRESSER SIZES

Unit	AMERICAN			HOFFMAN			TROY			PROSPERITY		
	L	W	H	L	W	H	L	W	H	L	W	H
Collar & Cuff	48	45¾	60½	48	46	61	45	44¾	61 11/16	47 5/16	40 7/16	60
Yoke	30¼	35⅛	53½	31	31	52	26	34	55	30	29	50
Bosom & Body	56	48¾	61	48½	45¾	61¼	47⅝	44¾	61 11/16	52	40 7/16	60
Sleeve Press	58	45¾	62	58	58	60	60	44¾	55	64	40 7/16	60
Sleeve Form	22	19	57	25¼	25¼	57½	27	21	57½	25¼	20	55

Revolving Bosom Press made by American is 69" wide, 66" deep and 58" high

FIRE PROTECTION *Dry-cleaning plants*

Outline of Recommended Fire Protection Standards for Dry Cleaning and Dry Dyeing Plants. (Summarized from the 1943 report to the National Fire Protection Association by its commitiee on flammable liquids)

CLASS I: Plants utilizing solvents rated above 40 according to the schedule developed by the Underwriters' Laboratories:

1. Location of dry cleaning and dyeing operations: Preferably in outlying, sparsely built sections; in buildings used for no other purpose, and not closer than ten feet to adjoining property line, except when exposed wall is standard brick or equivalent construction without openings.
2. Story height: One story without attic or basement.
3. Floor: Not below grade; without pits and wells; wearing surface to be incombustible and preferably non-sparking.
4. Walls: Brick, not less than twelve inches thick, or equivalent construction; no furring spaces; blank division walls between dry cleaning and dyeing operations and other operations.
5. Exits: Two, each remote from the other, opening directly to the outside.
6. Windows: Of wired glass; sash out-swinging and not secured; located in direction of least exposure.
7. Roof: Flat; of fire-resistive construction; light in weight and of non-combustible materials if possible explosion is to be vented upward.
8. Skylights: Required; of metal with wired glass; of pivot type.
9. No interior doorways leading to basement or to rooms which do lead to basement.
10. Drying Room: Separated from dry cleaning room by fire resistive wall; connecting door to be self-closing fire door; ventilation requirements as for dry cleaning rooms; equipped with steam jets to extinguish fires.
11. Ventilation system: Of capacity sufficient to insure one air change every three minutes; with means of remote control.
12. Fans: Blades of non-ferrous metal.
13. Wiring: In rigid conduit, in accordance with National Electrical Code for Class I hazardous locations.
14. Motors, switches, lighting fixtures, etc.: Explosion-proof type.
15. Heating System: Of steam or hot water; pipes protected with metal screens to prevent contact with combustible material; boilers preferably in separate building or separated by unpiereced twelve inch brick wall.
16. Humidity: Limited to a minimum of 60%; humidifier of manual or automatic control.
17. Solvent storage tanks: Underground.
18. Aboveground treatment tanks, clarifiers, pumps, etc.: See standards as issued by the National Fire Protection Association.
19. Fire protection: By automatic sprinkler system, carbon dioxide room flooding or steam smothering system.

CLASS II: Plants utilizing solvents rated 40 or below but which do not comply with CLASS III or IV requirements:

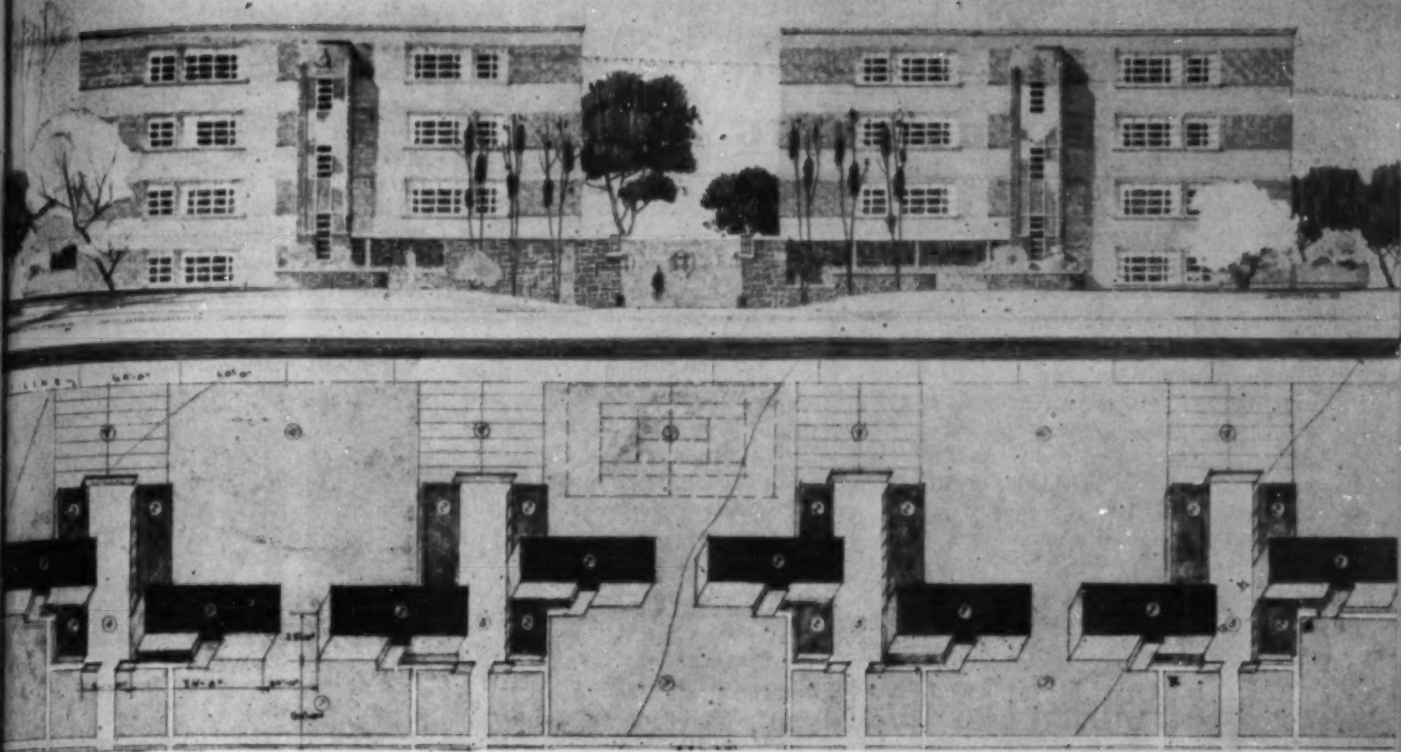
1. Location of dry cleaning and dyeing operations: Preferably in outlying, sparsely built sections; in building used for no other purpose except operations incidental to the dry cleaning business; the building to be not closer than ten feet to adjoining property line, unless exposed wall of building is of blank masonry construction; if protected with sprinkler system, requirements may be modified.
2. Story height: In lowest floor of building.
3. Floor: Not below grade; without pits and wells; surface non-combustible, also vapor and liquid tight if over basement.
4. Walls: Masonry or equivalent construction; no furring spaces.
7. Roof: If above grade floor, preferably of fire-resistive construction, if of combustible construction, ceiling to be one of one hour fire resistive classication.
9. Interior doorways leading to basement or to rooms which do lead to basement: Sill raised six inches and non-combustible; fire doors.
10. Drying Rooms: Drying preferably in cabinets or tumblers; if in dry rooms, such rooms to have walls of one hour fire resistive construction.
11. Ventilation system: (Same as class I)
12. Fans: (Same as class I)
13. Wiring: (Same as class I)
14. Motors, switches, etc.: (Same as class I)
15. Heating system: Of steam or hot water; pipes properly protected to prevent contact with combustible material; boilers preferably in separate building, or separated by unpierced twelve inch brick wall.
17. Solvent storage tanks: Underground.
18. Aboveground treatment tanks, clarifiers, pumps, etc.: See standards as issued by NFPA.
19. Fire protection: hand or wheel extinguishers in every room or area where flammable liquids are stored or used.

CLASS III: Plants employing equipment approved by Underwriters' Laboratories utilizing solvents rated at 25 or below and having flashpoint not lower than 138.2 degrees F:

1. Location: If dry cleaning plant is on same floor with other occupancies, plant to be cut off vertically and horizontally by one hour fire-resistive construction; requirements may be modified if plant is protected by sprinkler system.
13. Wiring: In rigid conduit.
14. Lighting fixtures: With incandescent lights.
15. Heating system: Boilers preferably in separate building, or separated by unpierced twelve-inch brick wall or equivalent.
17. Solvent storage tanks: Total inside aboveground solvent capacity of system, including tanks, not to exceed 550 gallons. Capacity of individual inside aboveground storage tanks not to exceed 275 gallons. Additional solvent capacity of system, in excess of 550 gallons, to be stored in underground tanks or in tanks in casings constructed in compliance with recommendations of NFPA.
18. Aboveground treatment tanks, clarifiers, pumps, etc.: See standards as issued by the National Fire Protection Association.
19. Fire protection: Hand or wheel extinguishers in every room or area where flammable liquids are stored or used.

CLASS IV: Plants utilizing solvents classified as non-inflammable at ordinary temperatures and only slightly flammable at higher temperatures (rated not over 5):

General: Installation and operating requirements mainly unnecessary.
11. Ventilation system: Adequate ventilation important because of toxic nature of solvent vapors involved.



ESIGNED BY ARCHITECTS • MASTERSON • RIDDLE • ABENDROTH • GUENTHER

PLASTICS
FOR
APARTMENTS

★ ★ ★

The General Electric Company offers architects, designers, and engineers the service of its plastics technicians. These experienced men can give you technical advice and information on the use of all plastics materials—laminates, compression, injection and extrusion molded, low pressure and cold molded. The General Electric Company molds and fabricates all kinds of compounds that are on the market today and because of this is not limited to one particular material or manufacturing process. For further information write Section C-293, One Plastics Avenue, Pittsfield, Mass.

The following list suggests the possible applications of G-E plastics in modern apartments:

Hardware • Doors • Kitchen Work Surfaces • Furniture • Wall Surfacing Materials • Lighting Fixtures • Partitions • Bathroom Fixtures • Electrical Supplies And Panel Boards • Special Parts

Hear The General Electric radio programs: "The G-E All Girl Orchestra" Sunday 10 P.M. EWT, NBC. "The World Today" news every weekday 6:45 P.M. EWT, CBS.

INSURE YOUR FUTURE BY BUYING WAR BONDS

DESIGNED BY PETZOLD

IFTY YEARS IN THE PLASTICS INDUSTRY

PD-200

GENERAL ELECTRIC

FOR BETTER BUILDING

(Continued from page 44)

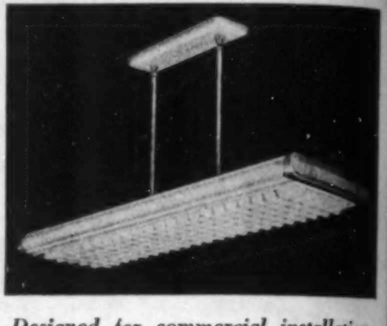
NEW FLUORESCENTS

Industrial

A new line of *Mitchelite All-Steel* industrial fluorescent fixtures includes 2-40 watt and 3-40 watt and 2-100 watt models, with choice of open-end or closed-end reflectors, in baked enamel or porcelain enamel finish. "Instant-Start" feature available on the 2-40 watt models. Wireway channels and reflectors are constructed of heavy gauge steel. Units finished in battleship gray outside. Mitchell Mfg. Co., 2525 Clybourn Ave., Chicago 14.

Commercial

Said to combine highest efficiency, modern design, minimum glare and low maintenance costs is a newly designed fluorescent fixture for commercial installations. The light from the four 40 watt tubes is shielded by evenly spaced egg-crate louvers. Reflecting surfaces, finished in "Plastox" white (88 per cent reflection factor) are so arranged as to eliminate "trapped light" resulting in high intensity with low surface brightness. Plastic side panels shield end tubes and contribute to smart appearance.



Designed for commercial installations

Made for stem or flush mounting. For stem mounting, unit is equipped with a ceiling canopy. Louvers are hinged for easy and quick maintenance.

The new unit is designated *Spero LVR-448,* and is available with Spero Insta-Lite, providing instantaneous lighting. The Spero Electric Corp., 18220 Lanken Ave., Cleveland.

GREASE INTERCEPTOR SIZE DETERMINATION

A new scientific method of determining the proper size of grease interceptor to be installed on any type of sink or fixture has been devised by the Josam Manufacturing Company of Cleveland. This new guide is based upon actual experiments and exhaustive tests conducted by the company's Engineering and Research Department, covering a majority of the types of sink installations. Results proved that the size of the interceptor to be used does not depend on the fixtures to be serviced, but upon the rate of flow of the waste water through the interceptor. The formula is as follows:

Maximum flow rate in gallons per minute $= \frac{3}{4} \times$ Cubical Contents (inches) $\div$ 231 inches.

POSTWAR NOTES

Infrared Lamps as Heat Source

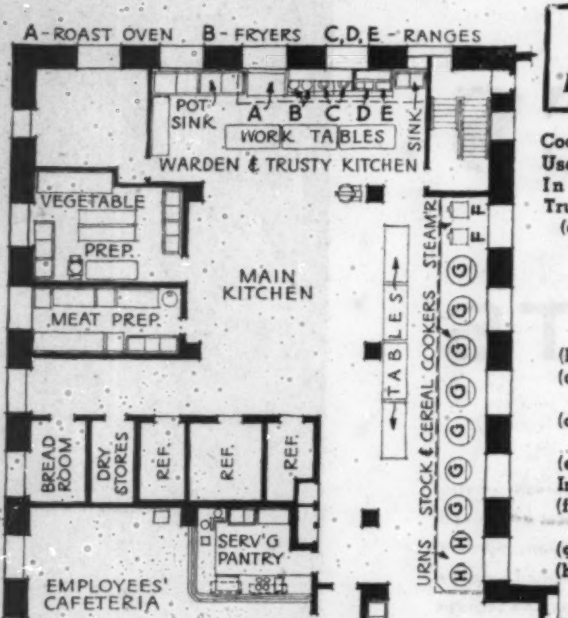
Infrared lamps developed under the impetus of war production will be one of the new postwar heat sources, speeding peacetime drying jobs in the home and industry, and providing a flexible supplement to regular space heating equipment, according to James D. Hall, Westinghouse Lamp Division engineer.

As comfort heaters, Mr. Hall forecast, radiant heat lamps screwed into regular lighting circuits and clamped

(Continued on page 112)

KITCHEN PLAN NO. 16: Sixteenth of a series of successful mass-feeding kitchen plans.

This plan, used in a famous eastern city prison, combines two kitchens—for easy observation by guards.



KEEP FOR HANDY REFERENCE!

Cooking Equipment Used:

In Wardens' and Trusties' Kitchen:

- (a) 1 No. 957 BLODGETT GAS-FIRED BAKING AND ROASTING OVEN
- (b) 2 fryers
- (c) 2 solid-top ranges
- (d) 1 open-top range
- (e) 1 fry-top range

In Prisoners' Mess:

- (f) 2 vegetable steamers
- (g) 7 stock kettles
- (h) 2 urns (100 gals. each)

Designed by: Harvey Wiley Corbett and Charles B. Meyers, Associate Architects, E. Brown, P. B. Polhemus Co., Inc., Consultant.

THE NO. 957 BLODGETT BAKING AND ROASTING OVEN used in this layout has one 12"-high and two 7"-high compartments, each separately controlled, providing 27 square feet of shelf area for roasting, vegetable and dessert preparation. For details and specifications of Blodgett Ovens, consult your equipment house or write

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IDEAS – ADVICE
INFORMATION
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HE IS AN EXPERT ADVISOR AND COUNSEL

The G. S. BLODGETT CO., Inc.

53 Maple Street
Burlington, Vt.

Reprints of this new series will soon be available to architects on request.

The Fruits of Peace

The skill and technique of the architect . . . master craftsman in boldly fashioning a new and better World . . . will contribute much to the enjoyment of the fruits of Peace.

Upon the architect rests the responsibility for building our cities of tomorrow . . . to modernize our offices, factories, schools and institutions . . . our municipal, county, state and federal buildings . . . our homes in keeping with the trend to better living.

Men and metal and production facilities have been at War . . . but they will return . . . and when they return, GF will again build Aluminum Chairs, Desks, Tables, Filing Cabinets and other items of equipment built to traditional GF standards.

GF
THE GENERAL FIREPROOFING CO.
YOUNGSTOWN 1, OHIO
U.S.A.

The GENERAL FIREPROOFING COMPANY YOUNGSTOWN 1, OHIO

METAL DESKS • ALUMINUM CHAIRS • METAL FILING CABINETS • STEEL SHELVING • FILING SUPPLIES • SAFES • STORAGE CABINETS

(Continued from page 110)

on the reading lamp fixture will be beamed to keep the reader's neck and shoulders comfortable. Similar lamps, spotted around the house, could protect tender plants from the cold, speed up the drying of hair and laundry indoors, and perform other household drying and spot-warming chores.

Up to now heat lamps have been applied mostly to industry for wartime drying jobs. A vast expansion in industrial uses, particularly in automobile plants, textile mills and food dehydration plants, is indicated, Mr. Hall said. Banks of infrared lamps will be on every postwar automobile assembly line, he predicted. From five to six minutes will be required to whisk a thoroughly dried automobile off the paint rack instead of the 50 minutes required by the customary drying process in prewar days.

In food dehydration, infrared reflector lamps can dry food in five to 30 minutes as compared with the 15 to 30 hours previously required.

Listing some peacetime industrial infrared applications which already are in operation, Mr. Hall said the man-made radiant heat—similar to that generated by the sun—is quickly and efficiently drying foundry molds in place of drying by kerosene torch; fusing label paint onto glass bottles; baking insulating varnish on electrical equipment and paint on electrical transformer tank covers; drying glue on paper envelopes; processing burlap used for sandbags, and drying sample swatches of cloth pasted on cardboard.

"One-Package" Kitchen

Merchandisers, Harry E. Warren, Hotpoint advertising manager for General Electric, declares, are agreed that the American home is ready for the complete "one-package" kitchen. The question is, what will be included?

Noting that uncertainty exists as to complete kitchen costs and basic equipment requirements among those asking for plans as well as among merchandisers, Mr. Warren said that all cost computations for room units will be based upon 10 per cent of construction cost for new homes, and a slightly lower per cent of total value of average property where remodeling is contemplated. According to the rule for price, "an all-electric kitchen in a home costing $7,500 and up will include electric refrigerator, range, cabinet sink with garbage disposall, built-in cabinet dishwasher, and sufficient base and wall steel cabinets to round out a well-designed kitchen." For homes costing less than $6,000, a dishwasher is not suggested; and where a home is in the $4,000 class, a "10 per cent" assembly of appliances should include electric refrigerator, range, cabinet sink, and one metal base and one metal wall cabinet for each appliance.

Stressed as the key to widespread acceptance of these units was the changing financing plans available under new home mortgage plans, by which it is possible to include most appliances under the single home mortgage in new buildings. Also, finance arrangements by mortgage companies will add on kitchen remodeling costs to existing mortgages, with adjusted payments to allow long-term liquidation.

Balsa Wood

Balsa wood is currently available on preference ratings of AA-5 or better, the Balsa Ecuador Lumber Corporation has announced, and "such rating should be assigned without difficulty or undue delay to any established firm which might wish to purchase the

(Continued on page 114)

Uncle GUS said nobody would buy "the fool stuff" when Dad originated cork flooring in 1899. But millions of feet have been sold since then and many Kencork floors laid thirty to forty years ago are still in perfect condition *today.* That means that if a Kencork floor were installed today it would probably wear until 1980 or 1990. But we can't make Kencork now because our plant is serving only the Navy (and even Uncle Gus would approve that) and by now he would also agree that there just isn't *anything* to match cork—nothing is as quiet, as resilient and as luxurious as

KENCORK
America's first resilient floor tile

After V day Kencork will again be made by Dad's son and heirs:
DAVID E. KENNEDY, INC.
78 Second Avenue Brooklyn 15, N. Y.

Photo by Ezra Staller

WHERE DO PEOPLE BUY?

ALL other things being equal, they patronize the attractive store in a good location. But there's more to good store arrangement and decoration than meets the eye. To give a sales-compelling impression, there has to be quality, too. And that's where Gold Bond walls and ceilings enter the picture.

For attractive walls and ceilings, you can't do better than Gold Bond Plaster Walls, made from Gold Bond Plaster and Finish Lime. There's a wall that will keep its smooth attractive surface indefinitely and under repeated decorations.

Or if you want a paneled effect, Gold Bond Insulation Tile or Plank's the thing. It comes in a wide variety of finishes, pre-decorated at the factory. Then there's Gold Bond Gypsum Grain Board that produces rich-looking effects at a fraction of the cost of wood panelings. They go up in a jiffy, reducing unprofitable shut-downs for alterations.

You can get money out of a ceiling—at least you'd think so when you watch sales climb after a noise-controlling ceiling's put in a noisy store or restaurant. And there's a Gold Bond acoustical product for every job and every pocketbook.

For complete information on all Gold Bond products, see Sweet's Catalog, or write us direct. National Gypsum Company, Buffalo 2, New York.

BUILD BETTER WITH GOLD BOND

Wallboard • Lath • Plaster • Lime • Metal Products • Wall Paint • Insulation • Sound Control

NATIONAL GYPSUM COMPANY • EXECUTIVE OFFICES • BUFFALO 2, N. Y.

FOR BETTER BUILDING

(Continued from page 112)

wood for civilian uses."

In a booklet just issued by the Corporation, the characteristics of balsa are described, and its postwar potentialities discussed. Prewar and present uses of balsa include: insulation of cold storage rooms, walk-in coolers, house panels, etc.; frames and parts for electronics equipment; room lining and baffle panels for broadcasting studios, sound proofing panels for industrial spaces, etc.

AVAILABILITY OF PLUMBING ITEMS

The War Production Board has prepared and issued a detailed list of Availability of Plumbing and Heating Items. It is not intended to be a substitute for the various orders referred to in the list, but furnishes a brief and convenient summary of the provisions of particular importance.

The list contains information on the order number affecting the item in question, whether or not the item is currently being produced, who may procure it, and how it can be obtained. For example: (Item) Kitchen sinks; (Order Number) L-42, Sch. 12; (Is Item Being Made) Yes—non-metallic; (Who May Procure) Anyone; (How Obtained) L-79 requires no rating.

Slide rule that locates decimal points

SLIDE RULE AND DECIMAL POINT LOCATOR

A new *Decimal Point Locator and Slide Rule* will determine the decimal point mechanically in involved expressions with results up to 19 places.

A novel scale arrangement gives 30-in. accuracy for cube root, 20-in. scale accuracy for square root. One setting of the hairline enables the computer to read square root, cube root and logarithm. One setting of the hairline also determines the decimal point location for square root and cube root.

The rule is 11 in. long, 2 in. wide, ⅛ in. thick. Constructed of Sorex tag lithographed, varnished, bonded. Comes complete in box with coat-pocket carrying case and an illustrated instruction manual written by M. L. Hartung, Associate Professor of the Teaching of Mathematics, University of Chicago. Pickett & Eckel, 53 W. Jackson Blvd., Chicago 4.

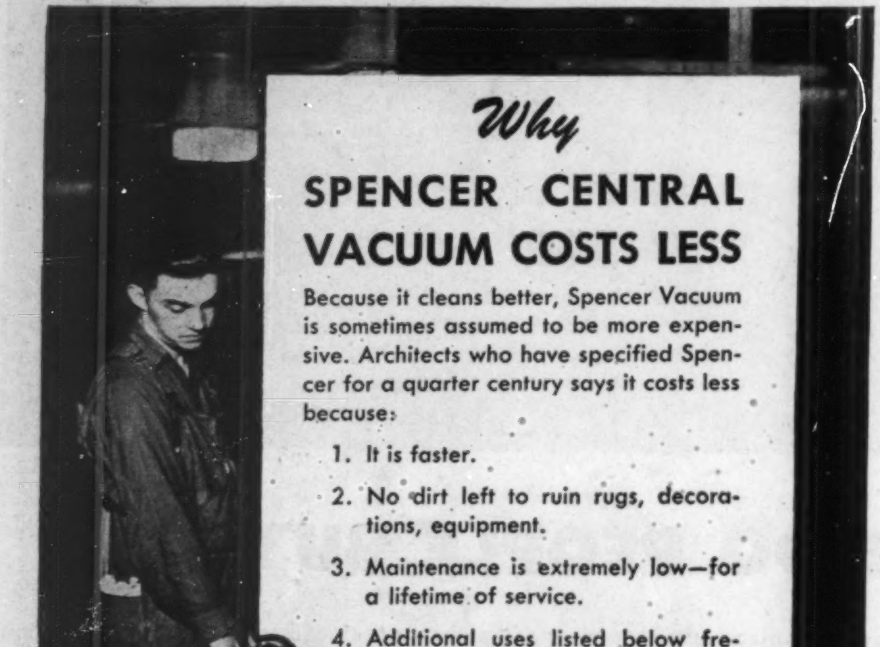
BEAM COMPASS

A compass capable of making circles in pencil or ink, from one to approximately 48 in. in diameter features a micrometer adjustment part to assure a rigid and accurate setting. All parts are nickel plated.

The compass has two hexagonal beams, measuring eight and 16 in. in length, with coupling unit for securely joining the two beams. A unit for holding divider, pencil or pen part moves freely on the beam but can be locked firmly in any desired position. Charles Bruning Co., Inc., 100 Reade St., New York 13.

RUBBER CEMENT

A *New Synthetic Rubber Cement* is now available in a variety of sizes from desk bottles to gallon cans. A transparent cement, it is said to stick tightly, lie flat, and not to smear ink, or curl or wrinkle even the flimsiest tissues. Excess can be removed with the fingers. The Craftint Mfg. Co., Cleveland, Ohio.



Why

SPENCER CENTRAL VACUUM COSTS LESS

Because it cleans better, Spencer Vacuum is sometimes assumed to be more expensive. Architects who have specified Spencer for a quarter century says it costs less because:

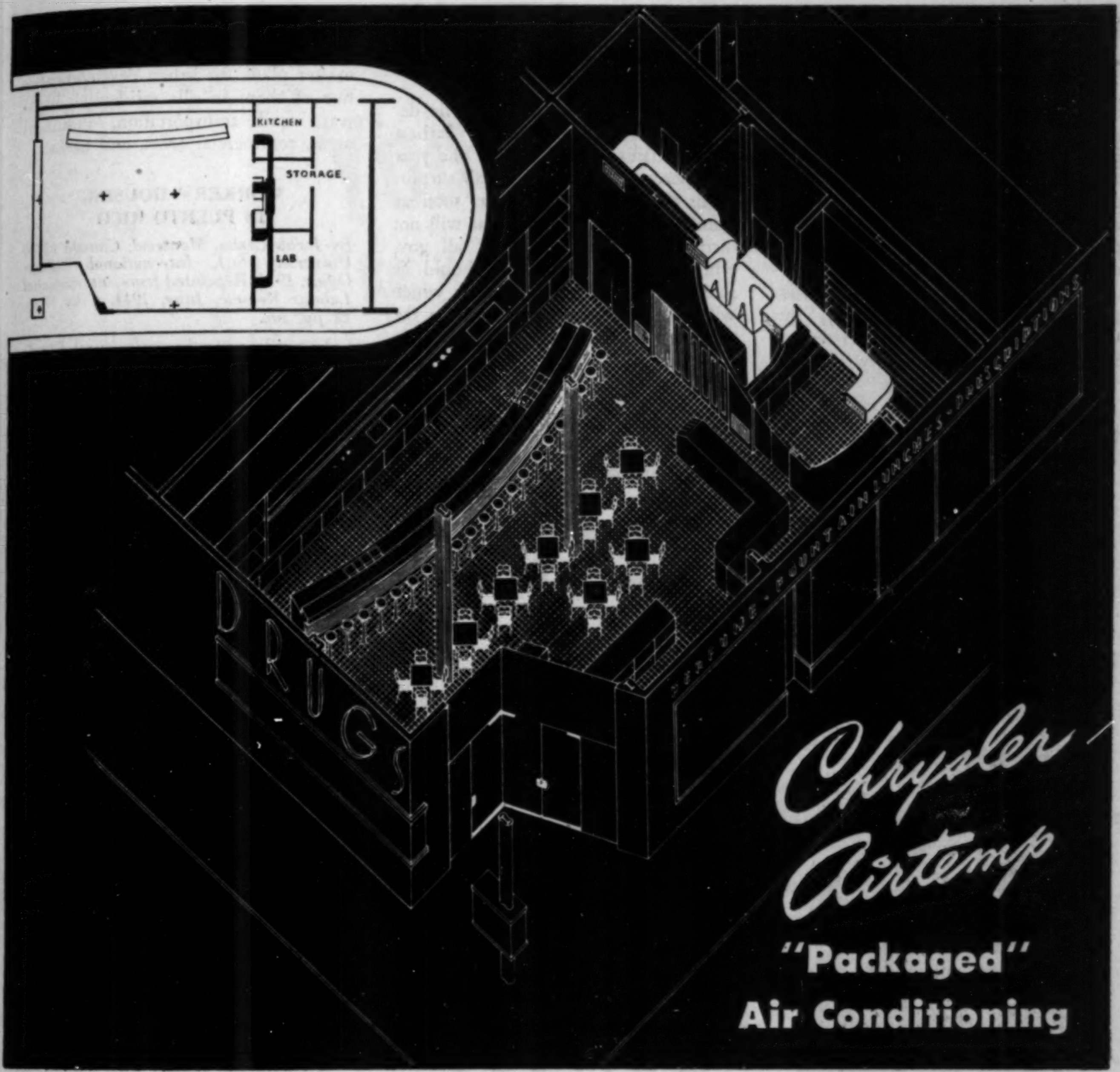
1. It is faster.
2. No dirt left to ruin rugs, decorations, equipment.
3. Maintenance is extremely low—for a lifetime of service.
4. Additional uses listed below frequently pay for the installation in a few years.

Ask for the bulletins.

SPENCER VACUUM CLEANING

HARTFORD

THE SPENCER TURBINE COMPANY, HARTFORD 6, CONN.


KITCHEN
STORAGE
LAB
DRUGS
PERFUME - FOUNTAIN LUNCHES - PRESCRIPTIONS
Chrysler Airtemp
"Packaged" Air Conditioning

Pulls Increased Patronage to Drug Stores

Concealed behind walls, or out in the open, Chrysler Airtemp "Packaged" Air Conditioning keeps the atmosphere in drug stores odorless, fresh and stimulating to customers.

When the war is won, the public will insist on the comfort of air conditioned drug stores. New buildings, with their many new modern features, will be obsolete without year 'round temperature-humidity control. Druggists know this fact! They are asking architects to include Chrysler Airtemp "Packaged" Air Conditioners which, in combination with the famous Airtemp Percolator Boiler, provide ideal year 'round indoor climate control—plus adequate hot water.

Chrysler Airtemp offers architects helpful cooperation in making plans and estimates not only for cooling, but heating and commercial refrigeration installations. Airtemp Division of Chrysler Corporation, Dayton, Ohio. • In Canada, Therm-O-Rite Products, Ltd.

Buy More War Bonds! Tune in Major Bowes every Thursday, CBS., 9 p. m., E. W. T.

CHRYSLER AIRTEMP

HEATING • COOLING • REFRIGERATION

REQUIRED READING

(Continued from page 32)

fictitious land assessments by lowering them to actual sales value; (2) a program for a state sales tax, to be used to pay for all charities, pensions and public education; (3) to substitute an occupancy or use-value tax for the present system of ad valorem taxation of real estate.

On the subject of governmental disposal of surplus war property, the Committee also has specific recommendations: (1) "temporary and demountable war housing should be demolished or removed at the earliest possible date—at least within one year after peace is declared;" (2) all surplus goods "should be marked as soon as possible and in a manner that will not disrupt normal trade"; (3) "all government-owned war plants should be sold at prices and in a manner which will not tend to harm or destroy the value of privately-owned industry in any location."

The Committee further puts itself down in favor of the formulation of master plans for urban development—five of them in all: residential, highways and transportation, industrial areas, commercial areas, and parks.

WORKERS' HOUSING IN PUERTO RICO

By Jacob Crane. Montreal, Canada (3480 University St.), International Labour Office, 1944. Reprinted from International Labour Review, June, 1944. 6 by 9 in. 22 pp. 10c.

In predominantly agricultural Puerto Rico the estimated average income per worker is "a little over $200." Necessarily, therefore, the island is peppered with substandard shacks, and the workers' housing problem is definitely acute.

Taking off from these facts, Mr. Crane of the NHA describes in full detail the existing slum areas and tells what has been done to date to alleviate the situation. As elsewhere, many of the early experiments were failures. When in 1920, for example, the dredging of San Juan harbor necessitated the removal of a swamp slum, the Homestead Commission attempted to re-establish the tenants of that centrally located but highly insanitary area in a new workers' village on the periphery of the city. It didn't work. The village grew, but the poor workers whom it was intended to house shied away from it.

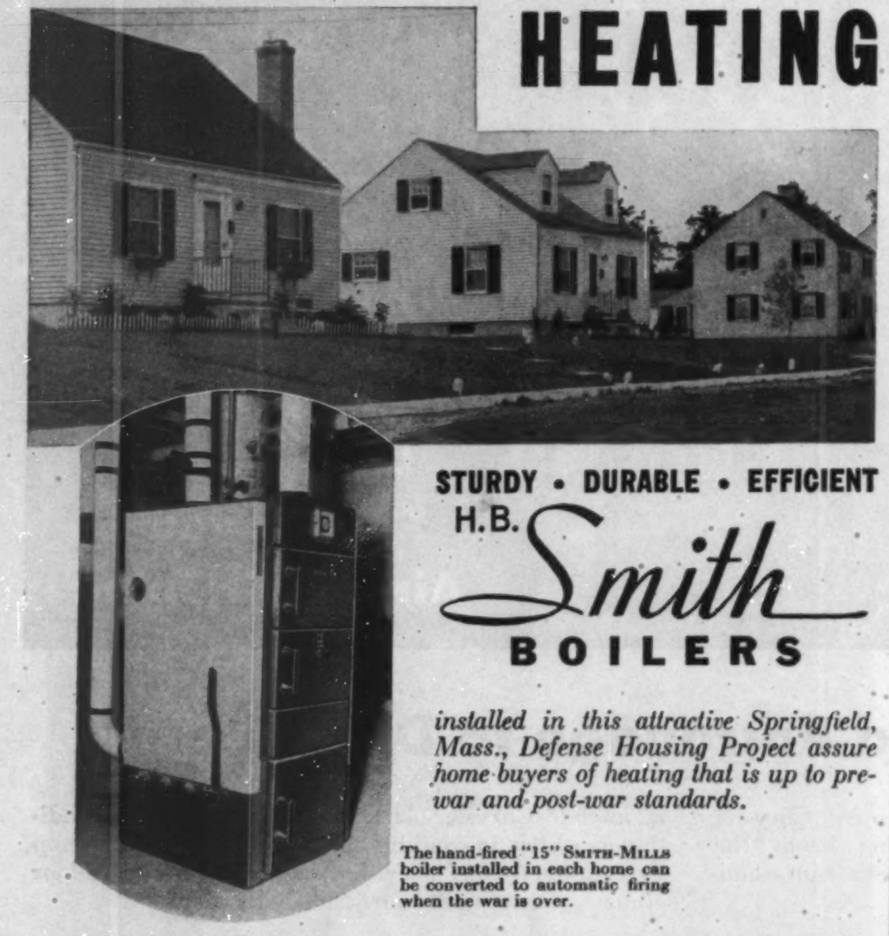
In several instances following hurricanes and fires new frame houses were built and donated to needy families; these houses quickly degenerated into new slums because the families to whom they were given actually could not afford the expense of their upkeep.

In 1935 the Puerto Rico Reconstruction Administration was created by Congress and things began to take a turn for the better. Then came the USHA and the FHA, the FSA and the Land Authority Act of 1941. The USHA alone in four years built 641 family dwelling units in San Juan, 1,301 in Ponce, 814 in Mayaguez, and 2,113 in 12 small towns. Tenancy in these low-rent projects ($4.50 a month average per unit) is strictly limited to families from substandard dwellings whose incomes are "not more than five times the rent and cost of utilities."

This is, of course, only the merest beginning. To eliminate the slums over a 20 year period, and at the same time to meet the housing needs of an increasing population, Mr. Crane estimates an annual need of 22,764 new dwelling units. It will take private enterprise as well as the federal government to meet that need.

(Continued on page 118)

War Housing with *Post-War* HEATING



STURDY • DURABLE • EFFICIENT

H.B. Smith BOILERS

installed in this attractive Springfield, Mass., Defense Housing Project assure home buyers of heating that is up to pre-war and post-war standards.

The hand-fired "15" SMITH-MILLS boiler installed in each home can be converted to automatic firing when the war is over.

In Springfield, Massachusetts, the name of "Penno-Built Homes" has become synonymous with "value received." Equipment for the last completed Penno development built expressly to house a portion of Springfield's swollen war worked population was carefully selected to make sure that purchasers were buying homes that would represent an investment of continuing value — not merely temporary shelter.

The installation of H. B. SMITH cast-iron boilers throughout this project is assuring a low consumption of hard-to-get fuel for the winter ahead, and modern, comfortable heating for the years to come.

THE H. B. SMITH COMPANY, INC., WESTFIELD, MASS.
BOSTON NEW YORK PHILADELPHIA

Your Design for a small post-war home may win this $2500.00 Contest

The United States Plywood Corporation in cooperation with Arts & Architecture, invites your entry to the second annual contest for the design of a small post-war home.

The competition . . . open to all architects, engineers, designers, draftsmen and students . . . started officially September 20, 1944 and runs for three months until December 20, midnight. Entries will be accepted up to that time at the office of Arts & Architecture, and are eligible if postmarked no later.

UNITED STATES PLYWOOD CORPORATION

616 West 46th Street, New York 19, N. Y.

Manufacturers of Weldwood Plywood and Plywood products

Douglas Fir

California Pine

Tekwood *

Tempered Tekwood *

Molded Weldwood

Northern Hardwoods

Southern Hardwoods

Armorply* Weldwood

Low pressure plastics

Tempreg *

*Registered trademarks

$2500.00 IN PRIZES WILL BE DISTRIBUTED AS FOLLOWS:

1st Prize	$1250.00
2nd Prize	500.00
3rd Prize	250.00
Honorable Mention . . .	100.00
Honorable Mention . . .	100.00
Honorable Mention . . .	100.00
Honorable Mention . . .	100.00
Honorable Mention . . .	100.00

Winning designs will be exhibited in principal cities all over the United States. Full credit will be given the designer.

There are no entry fees of any kind. You can get complete information on rules and regulations by writing to Mr. Sumner Spaulding, Arts & Architecture, 3305 Wilshire Boulevard, Los Angeles 5, California.

The United States Plywood Corporation is happy to offer jointly this opportunity for the expression of ideas that must now be uppermost in the minds of all concerned with the improvement of the American standard of living.

Weldwood

(Continued from page 116)

CITY PLANNING

PLANNING CLEVELAND IN 1943

Cleveland 14, Ohio (519 City Hall), City Planning Commission, 1944. 8½ by 11 in. 16 pp. illus.

Organized in November, 1942, the Cleveland City Planning Commission naturally had to spend a large part of 1943 building up its staff and "getting going." Yet several major accomplishments were achieved, among them the drawing up of a six-year program of public improvements for the postwar period, designed to meet employment needs. Other achievements: major zoning revisions, and an airport region study. Also, "substantial progress" was made on four broad plans: for rebuilding blighted areas and conserving neighborhoods in danger of blight; a freeway system, based on modern principles of highway design; thoroughfare plan revision, to more efficiently organize and utilize existing principal traffic-carrying arteries; and a recreational area plan.

SAINT LOUIS

28th Annual Report of the City Plan Commission. St. Louis, Mo. (342 Civil Court House), 1944. 8½ by 11 in. 29 pp. mim.

The St. Louis Commission centered its efforts in the past year on further revision and modernization of the city plan. Six board bills affecting the zoning ordinance were introduced in the Board of Aldermen, and three of them were passed. A plan for public recreational areas was submitted to the Board of Public Service; two ordinances affecting parks and recreation were adopted. And a number of special studies were prepared on such subjects as distribution, density, and trend of Negro population, survey of housing conditions, schools, etc.

NEIGHBORHOOD DESIGN AND CONTROL

An Analysis of the Problems of Planned Subdivisions. By Henry S. Churchill. New York 18 (512 Fifth Ave.), Natl. Comm. on Housing, Inc., 1944. 8½ by 11 in. 39 pp. $1.00.

Premature subdivision of land has resulted, Mr. Churchill says, in hundreds of thousands of abandoned peripheral lots in communities throughout the country. Financial losses, both municipal and private, are enough to condemn this practice without further ado, but in addition, its effects on future land development are disastrous.

Furthermore, Mr. Churchill points out, the average small builder is unable to develop an adequate site plan or consider except in a general way the community facilities problem. He builds a few houses a year, on isolated plots as near as possible to school, shopping center, church, etc. He has no control over street planning, playground provision, and the like.

To accomplish effective planning, the report continues, requires "not merely a competent planning body, but an understanding by land owners, developers and finance institutions that orderly land-planning and stable neighborhoods are, in the long run, to their advantage, as well as to the advantage of the consumer."

"If it is recognized," Mr. Churchill concludes, "that the purpose of a city is to provide for the welfare and happiness of its inhabitants, to enable them to earn a livelihood and raise a family in healthful surroundings, then there will evolve a land-pattern suitable to that end, and many seeming obstacles will disappear."

Experience...

ANOTHER LEG TO STAND ON

Consider Sedgwick—for two reasons (there are others, of course).

First—*for more than 50 years Sedgwick has designed, manufactured and installed elevators and dumb waiters—drawing on each preceding year's experience to improve succeeding models.*

And, second—*since the "defense work" days Sedgwick has been designing and manufacturing airplane elevators, ammunition hoists, galley dumb waiters, between-deck elevators, and special lifting and materials handling equipment.*

What does this mean to architects, engineers and builders? Simply this. Today's experience has taught Sedgwick much. Added to past experience, the results will take form in improvements in the design, construction and operation of postwar elevators and dumb waiters.

Sedgwick experience plus Sedgwick engineering ability can be of assistance when you are making your plans for the peacetime building boom that is sure to follow the war.

Sedgwick welcomes inquiries regarding elevators, dumb waiters and special lifts for postwar installation.

"MEN WHO KNOW ARE SOLD ON SEDGWICK"

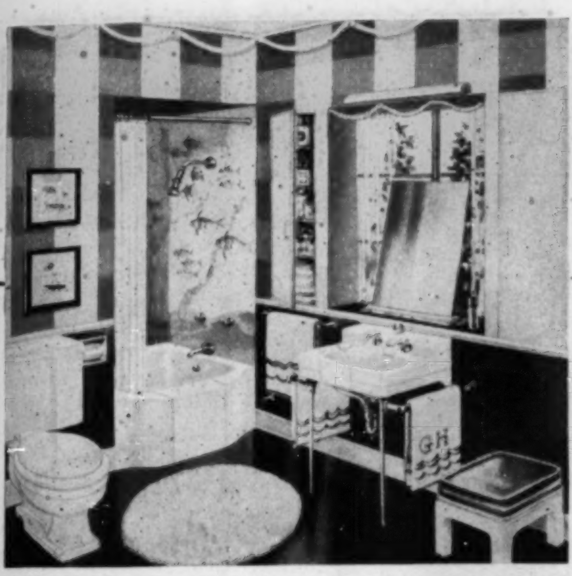
Sedgwick MACHINE WORKS, INC.

142 WEST 15th STREET NEW YORK 11, N. Y.

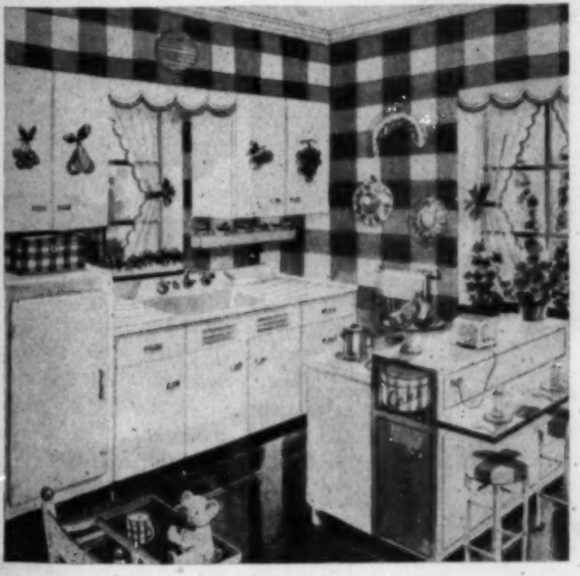
Since 1893 designers and manufacturers of specialized lifting equipment

ELEVATORS • HOISTS • ROTO-WAITERS • MATERIALS HANDLING EQUIPMENT

Your Clients Appreciate . . .



the Quality of Crane Fixtures



No matter what type of homes you are planning for your clients—whether they be modest bungalows in new subdivisions or more impressive residences in exclusive sections, they can have Crane quality plumbing designed to fit their budgets.

America recognizes the name Crane as standing for beautiful design, maximum comfort and practical utility in plumbing fixtures. The Crane postwar line will continue to offer the high quality and sturdy dependability that America has come to expect of plumbing equipment carrying the name Crane.

In your plans for homes of tomorrow, assure your clients the finest in plumbing equipment by specifying Crane. Call your nearest Crane Branch for information.

CRANE

CRANE CO., GENERAL OFFICES:
836 S. MICHIGAN AVE., CHICAGO 5

VALVES • FITTINGS • PIPE
PLUMBING • HEATING • PUMPS

NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS

by the safety measures of the law.

Other speakers at the hearing were: Frank A. Barrea, of the Brooklyn Real Estate Board; Edward P. Doyle, 42nd Street Association; Peter Grimm, former president of the Real Estate Board of New York; Frank H. Alcott, National Lumber Manufacturers Association; Arthur Jovis, Real Estate Board of the Bronx; Goode Harney, New York Urban League; Albert Raphael, attorney; John Hill, Social Service Society of New York; J. R. O'Donnell, O'Donnell Safety Devices; A. B. Johnston, United Tenants League of Greater New York; and W. J. McGowan, Realty Associates.

Assemblyman Mitchell, chairman of the Committee, stressed the fact that the public hearings would be followed by private hearings and careful consideration of all suggestions made. He invited the submission of written briefs by all interested individuals and organizations. Secretary of the Committee is Assemblyman Alfred A. Lama of Kings County, an architect.

HOUSING PROGRAM

Urging a postwar home building industry and program which will operate continuously on facts established by market study and analysis, technological advances and improved methods of finance—not on "dizzy spurts, booms and busts"—the National Committee on Housing has made public its recommendations for a national housing program and policy.

In the Committee's opinion, the first postwar rush for new homes may constitue a danger requiring continued governmental controls, at least during the early stages. However, such controls over production and marketing should be progressively relaxed as promptly as production increases, and should be discontinued as soon as balance is approached. The goal must be the prevention of a runaway market which would create a temporary boom followed by the inevitable slump. To this end, the Committee recommends that:

1. Plans be laid now for an orderly reconversion of the building materials supply industry covering *all items* in home construction to avoid future bottlenecks.

2. Priority, allocation and programming controls by the NHA should be continued if necessary, and should be administered in cooperation with local official and business groups. Priority precedence should be determined by localities based on (a) prevention of unemployment, (b) readiness of the applicant to proceed with construction, (c) relative need for the construction.

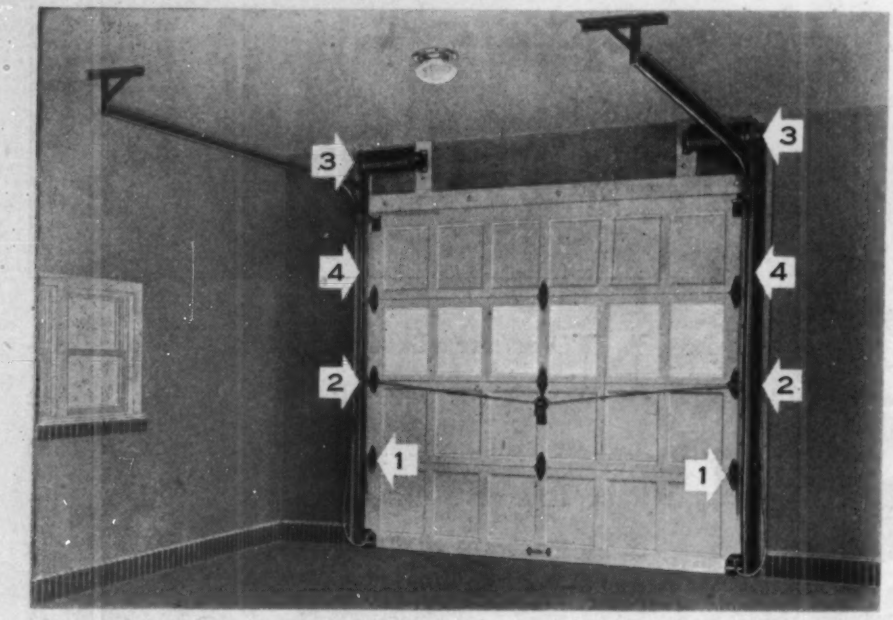
3. While a degree of price control will be needed in the beginning, it should be relaxed as soon as possible.

4. The period during which home loan contracts may be made to veterans under provisions of the "GI Bill of Rights" should be extended from the present two years after discharge to a longer period, to avoid concentrating this demand in the initial period and to lessen the danger of a runaway market during the first critical period of reconversion.

PRODUCERS' COUNCIL TO MEET

The 21st semi-annual meeting of the Producers' Council will be held at the Hotel Roosevelt, New York, November 27-29, 1944. All manufacturers and trade associations and the entire construction industry are invited to attend. For further information, address Mr. Russell T. Tree, Carrier Corp., Chrysler Bldg., New York.

(Continued on page 122)



Only the **Barcol OVERdoor** *has All of these features:*

1. **Weathertight, rattleproof closing without sticking or binding. Roller-crank action.**
2. **Self-latching. Spring bolts engage automatically when closing.**
3. **Tailored "Twin Torsion" balance springs. Safe and quiet. Neat appearance.**
4. **Continuous vertical track brackets on all doors. Rigid. Conceal and protect cable.**

BARCOL

FACTORY-TRAINED SALES and SERVICE REPRESENTATIVES IN PRINCIPAL CITIES

BARBER-COLMAN COMPANY
102 MILL ST. • ROCKFORD, ILL.

Modern floors do a real selling job in modern stores

SHOWING OF
AC

After years of continuous heavy service, Nairn Veltone Pattern #2956 in this Gimbel Brothers Salesroom is fresh, beautiful—like new.

● A fact which is strikingly proved by sales figures from coast to coast. Whether in great department stores, as in Gimbel Brothers in Philadelphia whose Bath Room Specialty Shop is shown above, or in smaller stores of every type, this most modern of floors—Nairn Linoleum—is being most effectively and convincingly proven as the outstanding floor for your postwar buildings.

A handbook on linoleum specifications has been prepared for your use. May we send you your copy?

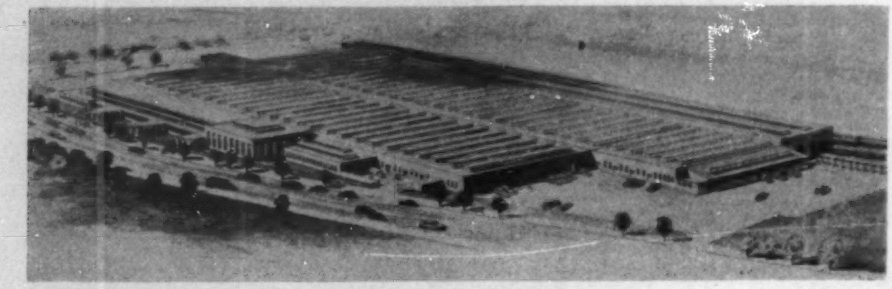
CONGOLEUM-NAIRN INC., KEARNY, N. J.

For modern floors and walls

NAIRN LINOLEUM

easy to maintain,
colorful, permanent, resilient.

THE RECORD REPORTS *(Continued from page 120)*



United States Postal Concentration Center, Long Island City, N. Y.

TO SPEED THE MAIL

Speed of construction was of paramount importance in building the United States Postal Concentration Center, in Long Island City, New York. The building was needed at once to handle the mail to the servicemen and women overseas.

The first conference between the New York District Engineers, U. S. Army, and Alfred Hopkins and Associates, the architects and engineers for the project, took place on May 16. The foundation contract was let to the Cayuga Construction Company and the work began on this phase of the construction on May 26.

The contract for the superstructure was let to the John A. Johnson Contracting Corporation on June 20. Field offices were immediately set up, concrete block began rolling to the site, and a sawmill was erected. This mill took the form of a straight-line production manufacturing system consisting of four assembly lines. The timber members of the 993 main trusses and the many secondary trusses, were cut to templates, drilled for bolts and split-ring fasteners, treated with end-grain sealer, loaded onto trucks, and delivered to the proper locations where they were later assembled and erected.

On June 24, the first concrete blocks were set in place. Exterior walls are of 4 in. integrally-colored concrete block, backed by plain block. The floor is reinforced concrete on fill, with working areas covered with resilient-type industrial flooring.

On July 7, the walls and steel column had been completed to take the first trusses, each measuring 160 feet

(Continued on page 124)

Specification highlights: Arches are 8 thicknesses ⅝" Douglas fir plywood, glued at right angles with Lauxein 888P, then pressed, 8 at a time, in special "fire hose" presses using 8 fire hoses for proper pressure. Another, larger, even more spectacular press produces floor modules, 32 at a time.

Built in hours . . . to last for years
with WOOD AND LAUCKS GLUE

Here's the recipe followed by the Standard Engineering Corporation of San Francisco in producing hundreds of modern, comfortable Pre-Bilt school rooms like this:

Take wood.

Add Laucks construction glues.

Combine with sound engineering design.

Season with advice of Laucks serviceman on best glueing, pressing techniques.

Finish vital parts (sills, plates, etc.) with Laucks Fungiseal (toxic water repellant).

Assemble complete with lighting, heat, ventilation, cabinetwork, in few hours.

The result: a structure that will last for years . . . built in hours.

For more information, if you are interested in the many possibilities of laminated arches and beams . . . plywood . . . and the use of construction glues in stressed cover structures and dry-built construction . . . write or wire the world's largest manufacturers of waterproof and water-resistant glues.

I. F. LAUCKS, Inc.
A Subsidiary of Monsanto Chemical Company
Lauxite Resins • Lauxein Glues

CHICAGO (2)—6 N. Michigan Avenue; SEATTLE (4)—911 Western Avenue; LOS ANGELES (1)—859 E. 60th Street. *Factories:* Seattle, Los Angeles, Portsmouth, Va., Lockport, N. Y. *In Canada, address:* I. F. Laucks, Ltd. Granville Island, Vancouver, B. C., or Hercules-Laux-Merritt, Ltd., Stanbridge, Quebec.

CONSULT LAUCKS
AMERICA'S GLUE HEADQUARTERS

SUPERMARKET

DOORS OF THE FUTURE...

Must close quietly, efficiently

Design and mechanism of LCN Door Closers will set the standard for the future, as they have in the past

NORTON LASIER COMPANY
466 W. SUPERIOR STREET
CHICAGO

DOOR CLOSERS
LCN

Copyright 1944, Norton Lasier Co.

THE RECORD REPORTS

(Continued from page 122)

in length, with the monitor framing as part of the trusss. They were raised in two sections and set in place. This was quickly followed by the placing of the wood rafters and the installation of the bridge.

On July 10, the 1½ in. laminated gypsum roof plank began to arrive at the site, was handled by special equipment and was soon ready to take the rigid insulation and built-up roofing.

The main structure is 1,020 ft. long and 700 ft. wide and covers 14½ acres, exclusive of the boiler house. In spite of the size of these buildings, and the speed with which the work was carried on, the entire program was completed without one serious accident.

EQUIPMENT INSTALLATIONS

Provisions pertaining to equipment installations and the installation or relocation of machinery in a structure as controlled by Construction Conservation Order L-41 have been modified.

Under amendments to Construction Conservation Order L-41 and to Direction 2 of the same order, any person may install, without WPB approval under L-41, a single piece of machinery or a group of related pieces of processing machinery or equipment approved by WPB on a special application form if the total cost of the entire installation, including the cost of the equipment, does not exceed $25,000 and if the cost of the job, not counting the cost of the equipment, does not exceed $5,000.

Under Interpretation 10 to Order L-41, if the cost of the installation exceeds the designated cost limits, permission under Order L-41 is required even though the equipment has been obtained on Form WPB-541 or Form WPB-542.

Regulations applicable to the relocation of equipment as covered in the amendment at Direction 2 now apply to any factory or industrial plant instead of as formerly only to factories or plants having a productive floor area of 10,000 sq. ft. or more. The former $500 cost limit for materials to be used in the relocation of any one piece of machinery or equipment remains.

CONSTRUCTION CEILINGS

The construction industry may add to presently established ceilings for construction services, increase in wage costs since October 3, 1942, that have been approved or authorized by the Wage Adjustment Board, National War Labor Board, or Economic Stabilization Director, the Office of Price Administration has announced.

Effective since August 26, the revised price regulation, #251, simply liberalizes the provisions of the regulation to better fit the needs of contractors, and reduces procedural and record requirements to an absolute minimum. Ceiling prices remain on all building and installation services.

HOUSING RELIEF

Housing relief for congested areas has been announced jointly by the WPB and the NHA. Apartment houses and other existing dwelling buildings may now be authorized for remodeling or conversion to provide smaller housing units in areas where the NHA has determined that an extreme housing shortage exists. Applications for permission to convert or remodel such structures should be filed with the nearest office of the FHA.

Application to remodel must be made on Form WPB-2896. Approval authorizes the applicant to extend a priority rating and use an allotment symbol for the purchase of his mate-

(Continued on page 126)

8 EXCLUSIVE FEATURES OF WHITE-RODGERS HYDRAULIC-ACTION TEMPERATURE CONTROLS

1. May be mounted at any angle or position, above, below or on level with control point.
2. Hydraulic-Action Principle incorporating solid-liquid filled bulb and capillary provides expansion force comparable to that of a metal bar.
3. Diaphragm motion uniform per degree of temperature change.
4. Power of solid-liquid charge permits unusually study switch construction resulting in positive contact closure.
5. Heavier, longer-wearing parts are possible because of unlimited power.
6. Dials are evenly and accurately calibrated over their entire range because of straight-line expansion.
7. Controls with remote bulb and capillary are not sensitive to change in room temperature. Accuracy of control is not affected by temperature changes in surrounding area.
8. Not affected by atmospheric pressure. Works accurately at sea level or in the stratosphere without compensation or adjustment.

TO MAKE DOUBLY SURE

THAT YOUR WHITE-RODGERS CONTROLS ARE CONSISTENTLY ACCURATE

Ordinarily the critical inspection of materials, parts and subassemblies, combined with the final calibration and operation tests which all White-Rodgers Controls undergo would seem ample assurance to the most exacting user.

But the White-Rodgers Engineering Department makes *doubly sure* that these controls are consistently accurate. Random samples are taken from each production lot before the controls reach you. These are again tested by a member of our Engineering staff under conditions simulating actual use. If the results of these tests do not measure up to the rigid test specifications, the whole lot of controls is rechecked.

You can make *doubly sure* too by specifying White-Rodgers Controls today!

HYDRAULIC ACTION CONTROL

WHITE-RODGERS
ELECTRIC CO.
1202K Cass Ave. St. Louis, Mo.

Controls for Refrigeration • Heating • Air-Conditioning

"CUSTOM" LIGHTING
WITH Standardized FIXTURES
BY
SYLVANIA
For OFFICES
For DRAFTING ROOMS
For LABORATORIES
For HOSPITALS
For SCHOOLS
For INSTITUTIONS
HOW TO SOLVE YOUR INDUSTRIAL GENERAL LIGHTING PROBLEMS with
Fluorescent at its finest
SYLVANIA

SYLVANIA offers new FLUORESCENT FIXTURE CATALOGS to Architects.

Release of steel for fluorescent fixture fabrication has added commercial and industrial models to the Sylvania Fluorescent Fixture line. The two catalogs illustrated above cover these additions and describe design improvements you will want to know about. Just fill in the coupon below, and a file folder containing these catalogs will be sent to you without obligation on your part.

SYLVANIA
PRESENTS
Fluorescent at its Finest

The Leading Manufacturer of Fixtures
in the Fluorescent Field

SYLVANIA
ELECTRIC PRODUCTS INC.
SALEM, MASSACHUSETTS

FLUORESCENT LAMPS, FIXTURES AND ACCESSORIES, INCANDESCENT LAMPS, RADIO TUBES, CATHODE RAY TUBES, ELECTRONIC DEVICES

SYLVANIA ELECTRIC PRODUCTS INC.
Dept. AR 10 Boston Street, Salem, Mass.

Please send me the new Sylvania Industrial and Commercial Fixture catalogs.

NAME______________________________
COMPANY______________________________
ADDRESS______________________________
CITY________________ STATE________________

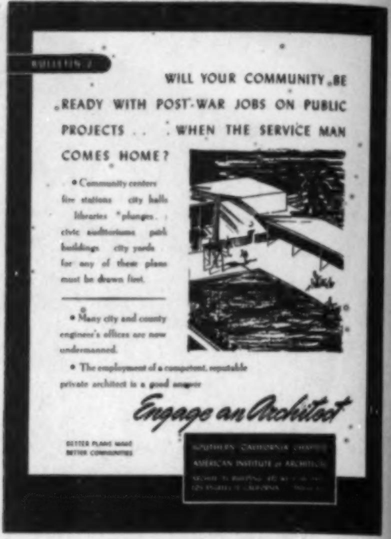
rial and equipment. The applicant will be restricted to the materials and equipment permitted under the War Housing Critical List.

WPB emphasized that the $200 limit for construction which may be done on a dwelling unit in any calendar year without authorization, and the $1000 limit for an apartment building or other type of residence housing six or more families, still applies, as do the former provisions pertaining to maintenance and repair.

"BLUEPRINT NOW!"

Paul V. McNutt, chairman of the War Manpower Commission, has given his blessing to the assignment of planning engineers and technicians for blueprinting the reconversion of the nation's industries to civilian production.

Mr. McNutt listed two guiding principles for the authorization by the WMC field staff of personnel for reconversion planning as follows: (1) the assignment of workers shall be limited to planning engineers and technicians and shall not constitute a drain upon production workers needed for continued urgent war output; and (2) no civilian production planning shall be undertaken which would interfere with war work of high urgency.



BULLETIN 2

WILL YOUR COMMUNITY BE READY WITH POST-WAR JOBS ON PUBLIC PROJECTS . . . WHEN THE SERVICE MAN COMES HOME?

- Community centers fire stations city halls libraries plunges civic auditoriums park buildings city yards for any of these plans must be drawn first.

- Many city and county engineer's offices are now undermanned.
- The employment of a competent, reputable private architect is a good answer

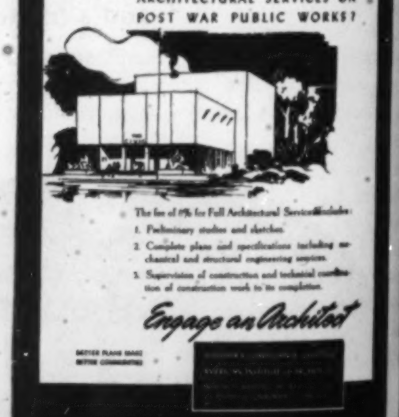
Engage an Architect

BETTER PLANS MAKE BETTER COMMUNITIES

SOUTHERN CALIFORNIA CHAPTER
AMERICAN INSTITUTE of ARCHITECTS

CALIFORNIA ACTS

California has inaugurated a campaign to interest everyone in planning now for postwar construction in the community. Their "Bulletins," two of which are shown above and below in miniature, are clear, concise, direct, and striking (as the originals are printed in two colors). Other architectural organizations throughout the country may well emulate this constructive program.



BULLETIN 3

WHAT IS THE FEE FOR FULL ARCHITECTURAL SERVICES ON POST WAR PUBLIC WORKS?

The fee of [illegible] for Full Architectural Services includes:

1. Preliminary studies and sketches.
2. Complete plans and specifications including mechanical and structural engineering services.
3. Supervision of construction and technical coordination of construction work to its completion.

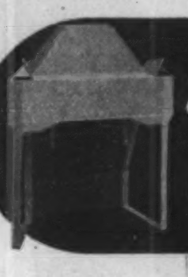
Engage an Architect

BETTER PLANS MAKE BETTER COMMUNITIES

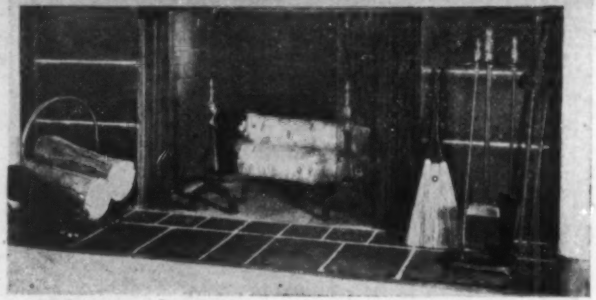
SMALL HOME CONTEST

America's ideal postwar small home for the average family is the objective of the Second Annual Architectural Competition of the magazine *Arts and Architecture,* sponsored this year by

(Continued on page 128)



Engineered NOT TO CHILL
Guaranteed NOT TO SMOKE



Bennett "Fresh-Aire" Fireplace Unit

EVERY minute, as its fire burns, a fireplace exhausts an average of more than 200 cu. ft. of air from a house. Then what happens?

CASE 1.
Suppose construction is tight. Not enough replacement air can enter from outdoors. Result, with an *ordinary* fireplace: partial vacuum, downdraft, SMOKE!

CASE 2.
Suppose construction *does* allow replacement air to come in through small openings. Result, with an *ordinary* fireplace: chilling drafts, uneven temperatures, interference with temperature controls.

In *either* CASE 1 or CASE 2, the Bennett *Fresh-Aire* Unit *supplies* replacement air at the right temperature. Here's how. Bennett *Fresh-Aire* Unit draws replacement air from outdoors, heats the air in special chambers and distributes it, *comfortably warm,* to living quarters.

You can depend on Bennett *Fresh-Aire* Unit because it is *engineered* not to chill and *guaranteed* not to smoke.

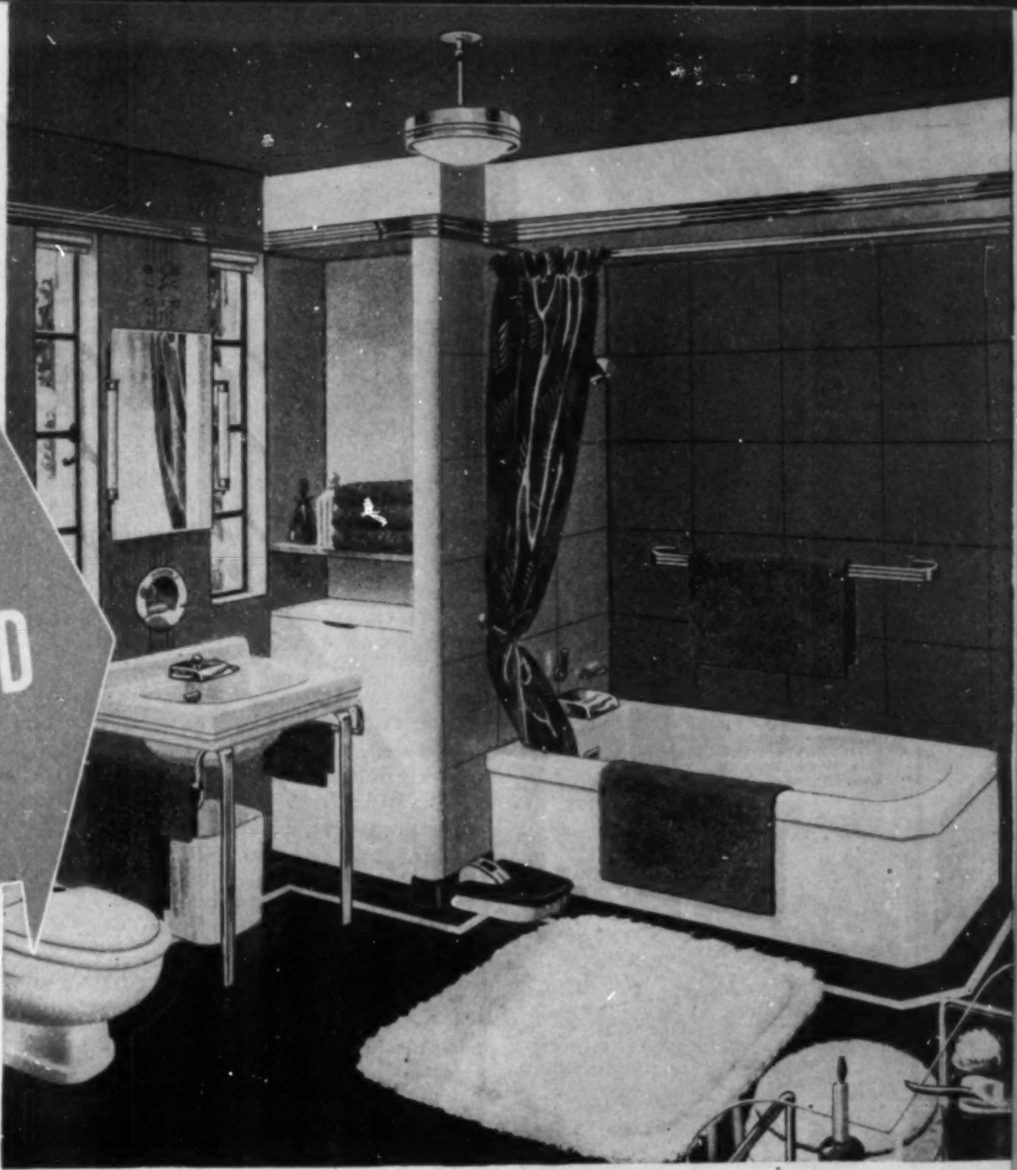
Refer to Bennett pages in Sweet's, or send for our free catalog..so that you may meet the ever-increasing demand for the efficient, smokeless fireplace.

When you are ready to build, we will be ready to deliver.

BENNETT-IRELAND • 1044 MAPLE STREET, NORWICH, N. Y.

BENNETT
Fresh-Aire
FIREPLACES

Prepare for this INCREASED DEMAND



All Steel Bathrooms. In this colorful, modern bathroom, wall and ceiling panels, cabinets, washbasin and bathtub are porcelain enamel, fused on a base of U·S·S VITRENAMEL Sheets.

OUR clients—who will build, remodel or buy millions of postwar mes—will demand bathrooms, chens, laundries of colorful, durle, easily cleaned porcelain-enamd steel.

n retail stores, when it is again sible, many merchants will build customer-appeal into store nts, counters, cabinets and shelves, ting full value from the adaptaty, the durable beauty and conience of porcelain-enameled steel.

n factories, office buildings, hotels, taurants, laboratories and hospi, from lavatories to operating ms, the war-proved versatility of h-grade porcelain-enameled steel kes its almost universal use a reaable certainty.

New frits in a wider color range—ich makes possible vari-colored ign as well as solid colors—add que beauty to the more practical lities. They enable the finished ducts to withstand acids, rain and sleet, sun and frost, corrosion, abrasion and impact.

The *permanence* of all this utility and beauty depends upon the use of a specially prepared steel base. We have perfected sheets of special composition; we have developed a special surface treatment; we maintain rigid control, in the production of U·S·S VITRENAMEL Sheets, of the special processes that make them light and strong.

Their uniform metallurgical properties insure maximum ductility for drawing, forming and stamping. Their treated surface makes the frit practically part of the metal, so firm is the bond established in firing. Their built-in resistance to a wide range of deteriorating agents insures long life for all equipment in which they are used.

Are you prepared to give your postwar clients all the latitude of design, variety of color and permanent beauty they got with porcelain-enameled steel?

Why not get in touch with our VITRENAMEL engineers for authoritative information on present and future developments which affect the demand for enamel products? Write today, without obligation, for this technical service.

U·S·S VITRENAMEL SHEETS

ARNEGIE-ILLINOIS STEEL CORPORATION
Pittsburgh and Chicago

Columbia Steel Company, San Francisco, *Pacific Coast Distributors*
United States Steel Export Company, New York

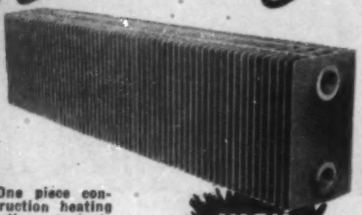
NITED STATES STEEL

Specify
MAINTENANCE
FREE-UNIT
HEATERS
GRID

After 10 or 13 years continuous operation, many plants report no maintenance expense.

In corrosive atmospheres GRID Unit Heaters have proven the best by test.

Here's Why



*One piece construction heating sections (patented) of high test cast iron that withstand steam pressures up to 250 lbs.

*No soldered, brazed, welded or expanded connections to become loose or develop leaks.

*No electrolysis to cause corrosion, breakdowns, leaks, or heating failures.

HIGH TEST Cast Iron HEATING SECTIONS

As one large manufacturer reports, "We have in our plant 20 GRID Units that were installed in 1931. To date they have required no maintenance and have been eminently satisfactory. Due to the chemical conditions in and around our plant other than cast iron heating construction has not served our purpose." Another plant reports, "GRID Units are better than other types in corrosive atmospheres and our units have been in use for over 10 years."

GRID Unit Heaters are made to last, to stand wear as long as the pipes furnishing steam to them. They are unit heaters for permanency. Complete data and capacity tables upon request.

D. J. Murray Manufacturing Co.

Wausau, Wisconsin

Offices in all principal cities.

GRID

(Continued from page 126)

the United States Plywood Corp.

Results of the competition, which is open to all architects, engineers, designers, draftsmen, technicians and students, will be offered to the public as usuable and buildable plans. Prizes total $2,500, with a first prize of $1,250. The closing date is December 20.

The first competition, last year, drew more than 500 entries, submitted from every state and from 10 foreign countries, and produced some very stimulating and progressive design. Eero Saarinen, widely known Finnish-born architect of Washington, D. C., working in collaboration with Oliver Lundquist, won first prize.

Sumner Spaulding, F.A.I.A., is acting as professional advisor to the competition, representing the A.I.A. Complete information, including a copy of the rules and the statement of the problem, can be obtained by writing Mr. Spaulding, c/o *Arts and Architecture,* 3305 Wilshire Blvd., Los Angeles 5, Cal.

FLOOD CONTROL IN BEAVER COUNTY

Application for a federal flood control project calling for more than seven miles of high water walls and flood levees along the Ohio and Beaver rivers in Beaver County, Pa., has been submitted to the National Rivers and Harbors Congress in New Orleans.

The flood control program was drawn up by Michael Baker, Jr., of Rochester, Pa., Planning and Cosulting Engineer for Beaver County. It is part of Mr. Baker's complete master plan for the County, presented to the County Commissioners in a report just released (see "Required Reading," p. 26).

The program would provide an

(Continued on page 130)

SITUATIONS WANTED

YOUNG MAN, age 36, married, pleasing personality, outstanding qualifications, excellent references, Reg. Architect, college graduate, desires to become associated with established concern.
Box 16, ARCHITECTURAL RECORD, *119 West 40th Street, New York 18, N. Y.*

STRUCTURAL ENGINEER (Lic. Prof.) with broad and extensive experience in the design of commercial and industrial buildings as well as general building construction, would be interested in connection with practicing architect for mutual benefit.
Box 18, ARCHITECTURAL RECORD, *119 West 40th Street, New York 18, N. Y.*

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MIRRORS

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Atlas White cement increase effe
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added a new function to industri
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working areas, floors made wit
Atlas *White* cement (instead of gra
cement) act as giant reflectors o
light, augmenting the well-know
effectiveness of light-colored wal
and ceilings.

Light-Reflecting Floors made wit
Atlas White cement have prove
their value wherever installed. I
one bomber plant tests showed
61% increase in light reflectio
compared to an adjacent gray
cement floor under identical ligh
ing. They break up shadows, pu
more light on working surface
and improve seeing on all jobs. Be
cause they are made of Atlas Whi
cement, their reflection value i
lasting.

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of lighting surveys and experience o
maintenance engineers, ask for th
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easy to clean, easy to keep clean, and retai
their reflection advantage. Maintenance i
simple—frequent sweeping, occasional dam
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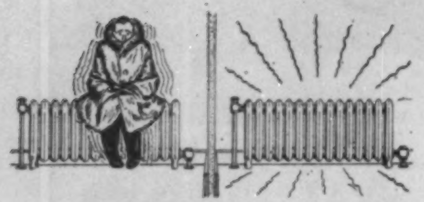

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Pioneers of the Vacuum System of Steam Heating
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Making Boosters for U.S. Army Ordnance

Webster Steam Heating

(Continued from page 128)

$8,500,000 flood wall on the east side of the Ohio River from Legionville, near, Ambridge, to Rochester, and a $980,000 flood levee on the Beaver River to take care of the low-lying areas in Bridgewater Borough. The flood wall would run for a distance of 618 miles and the levee construction at Bridgewater would be 1.04 miles in length. If the program is approved, it would be carried out by the U. S. Engineers.

WHAT PRICE HOME?

The majority of American families expecting to build their own homes to order when restrictions are relaxed on manpower, materials and equipment, are budgeting an outlay of $5,500 or more for construction alone, exclusive of land cost, F. W. Dodge Corporation reports. This estimate is based on an analysis of authenticated reports on single-family dwelling construction contemplated by 18,428 families personally interviewed during the last seven months by the Dodge staff in all states east of the Rocky Mountains.

The greatest demand for homes as revealed by this survey is in the higher cost brackets of construction prohibited during the last three years by defense and war restrictions. Two-thirds of the postwar demand is for homes to cost more than the WPB's maximum for eligible war workers.

The survey shows that fewer than 12 per cent interviewed expect to obtain a home built to order for $4,500 or less, exclusive of land cost. Sixteen per cent expect to spend $9,500 or more for dwelling construction.

APPOINTMENTS

Regional Planner

Ira J. Bach, of Chicago, has been appointed Director of the Tri-County Regional Planning Commission for Adams, Arapahoe and Jefferson Counties, Colorado, organized last month. Offices are at the Denver University Government Center, 1425 Cleveland Pl., Denver.

M. I. T. Faculty

Eugene Henry Klaber, F.A.I.A., architect and city planner, and Charles H. Warner, Jr., A.I.A., architect, have been appointed to the faculty of the School of Architecture of Columbia University.

Mr. Klaber, former president of the Chicago Chapter, A.I.A., will be an associate in the department of archi-

(Continued on page 132)

Cleveland's most friendly hotel is its most convenient one, too.

Hotel Cleveland
CLEVELAND, OHIO

Directly Connected with Union Passenger Terminal

Announcing

The Twelve War Bond Winners

in

SPEAKMAN'S

75th Anniversary Contest

To every contestant who participated in the 75th Anniversary Contest, Speakman offers sincere appreciation for your entry. To the winners, Speakman sends its congratulations and a War Bond.

So large was the number and so high the quality of the entries received that the judges found it difficult to decide on just one best paper from each group. Therefore, The Speakman Company has authorized the award of three prizes to each classification—a $500 War Bond, a $100 War Bond, and a $50 War Bond.

THE WINNERS

Architects and Engineers

$500 War Bond: Robert E. Bennett
Pasadena, California

$100 War Bond: L. Walter Moon
St. Louis, Missouri

$ 50 War Bond: Vincent J. Schoeneman
Crafton, Pennsylvania

Plumbing Contractors

$500 War Bond: Arthur D. Ray
Stockton, California

$100 War Bond: A. C. Smith & Co., Inc.
Newburgh, N. Y.

$ 50 War Bond: Joseph D. Rhoads
West Chester, Pennsylvania

Wholesale Distributors

$500 War Bond: E. M. Crocker
Baltimore, Maryland

$100 War Bond: Busser Supply Co.
Lewisburg, Pennsylvania

$ 50 War Bond: Lehigh Valley Supply Co.
Allentown, Pennsylvania

Wholesale Distributors' Salesmen

$500 War Bond: Walter F. Schiener
W. A. Case & Son Mfg. Co.
Buffalo, N. Y.

$100 War Bond: Lloyd Kirkley
Schumacher & Seiler, Inc.
Baltimore, Maryland

$ 50 War Bond: Alfred H. Klahn
Dalziel Plumbing Supplies, Inc.
San Francisco, California

THE JUDGES: Rev. Willard G. Purdy, Pastor, First-Central Presbyterian Church, Wilmington; Gerrish Gassaway, Manager, Wilmington Chamber of Commerce; Howard F. McCall, President, Central National Bank and President, Wilmington Board of Education.

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The Blo-Fan is more than a fan — more than a blower. It combines the advantages of both. It has the *volume* of the breeze fan plus the *power* of the blower. Postwar home builders will thank you for specifying Blo-Fan because of the riddance of unwanted air —the savings in cleaning and redecorating.

Specify Blo-Fan
for Kitchen - Bath
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*See Catalog in Sweet's or Write for Details.

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BRANCHES (TO BE RE-ESTABLISHED AFTER THE WAR)
SAN FRANCISCO • SEATTLE • CHICAGO • NEW YORK

THE RECORD REPORTS

(Continued from page 130)

tecture, and will direct work in planning and housing. Mr. Warner, who was graduated from the Columbia School of Architecture in 1938, will be assistant professor in charge of design.

Land Development Chief

Skidmore, Owings & Merrill, New York architects, have announced the appointment of James Waller Rogers as director, Land Development Division.

NEW OFFICES

Industrial Design Firm

Ruth Gerth, George Kosmak, Alexander Kostellow and Rowena Reed have formed a new firm of industrial designers, with headquarters at 228 E. 61st St., New York 21.

Exhibit Designers

Roy C. Bertell and William H. Sheffield, formerly vice-presidents of the Ivel Corporation, have formed the Bertell-Sheffield Company, designers and builders of industrial and educational exhibits and displays. In addition, the new company will specialize in the design and construction of showrooms, reception rooms, offices and stores. Address: 11 W. 42nd St., New York.

ASPHALT TILE INSTITUTE

Following the adoption of a constitution and by-laws recently, the Asphalt Tile Institute is working toward the formation and adoption of a constructive program for the Asphalt Tile Industry. The program is expected to include the development of new uses and markets, collection and dissemination of statistics and research work and scientific and technical investigations which may be helpful in the manufacture and distribution of the Industry's products.

THEODORE H. SKINNER

Col. Theodore Hobart Skinner, widely known New York architect, died at his home at Kenwood, N. Y., on September 4.

Col. Skinner designed buildings for a number of colleges in New England and Virginia, including Mt. Holyoke and Smith. Among other examples of his work are the Plymouth Congregational Church and several schools in Sherrill, N. Y., and the plants of Oneida, Ltd., in Sherrill and Kenwood.

NEW ARCHITECTURE IN MEXICO

Hospitals
Town Houses
Country Houses
Office Buildings
Store Groups
Factories
Schools
Apartments
Workers' Houses

Modern Architecture below the Rio Grande, with its straight line, unornamented flat surfaces, presents a dramatic contrast to the old, heavily ornamented Spanish Colonial buildings. Yet Esther Born, in her book "THE NEW ARCHITECTURE IN MEXICO" has delineated in text, photographs and colored diagrams, including supplementary text on mural painting, sculpture, and pottery, how perfectly acclimated it has become to its background.

This new volume is a reference source for building designers everywhere, and contains a complete assemblage of the progressive thought of architects and engineers of the Aztecs and the Spanish Americans. Reduced price $2.50.

ARCHITECTURAL RECORD
Book Dept.
119 West 40th, New York 18, N. Y.

Enclosed is a check or money order for $2.50. Please send me NEW ARCHITECTURE IN MEXICO.

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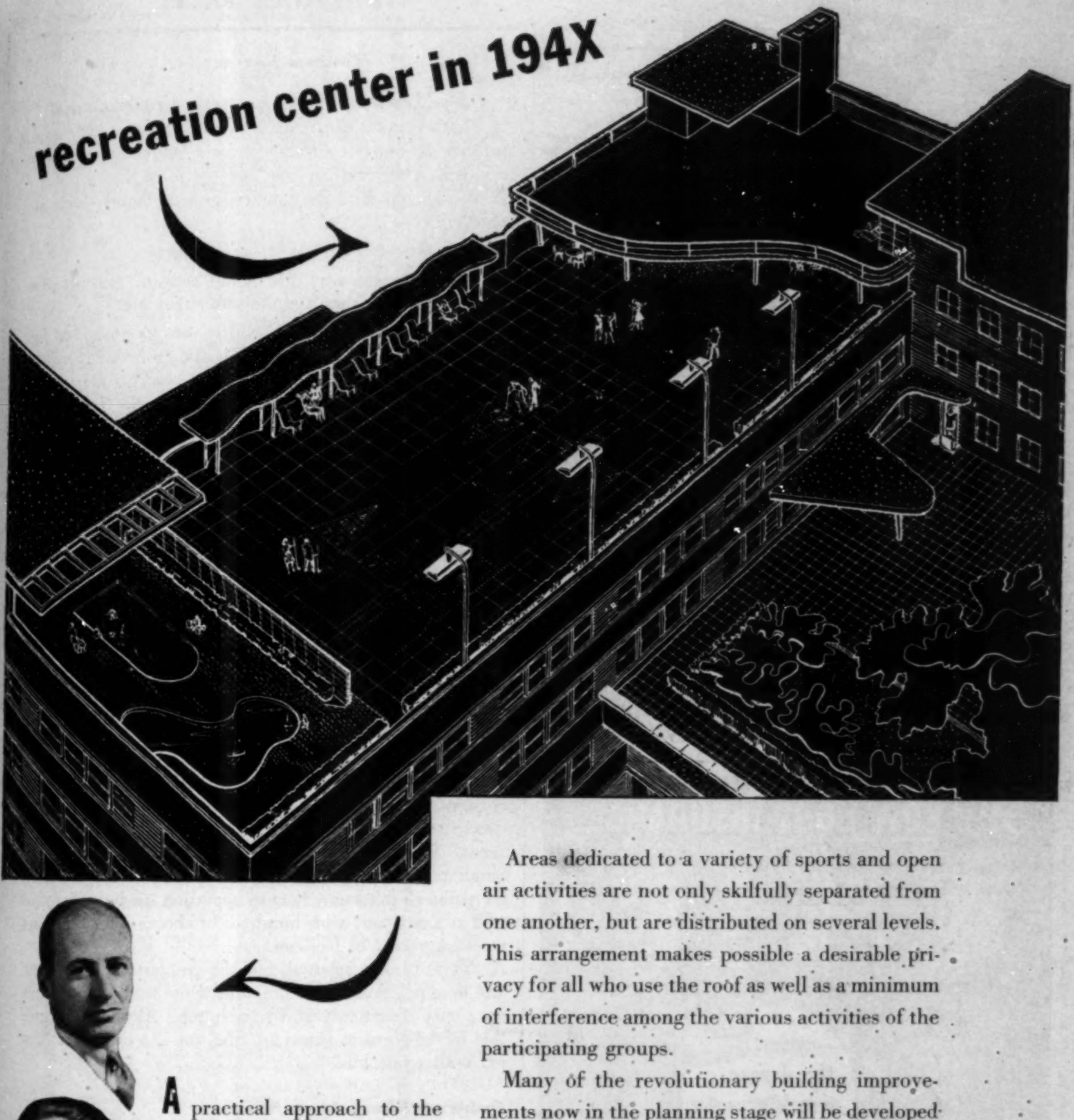
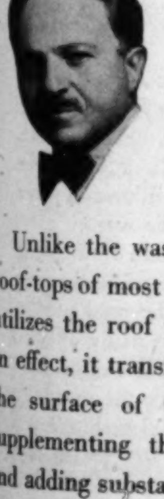
AR 9-44

recreation center in 194X





A practical approach to the problem of open-air recreation in urban areas is efficiently provided by this original plan, developed by the New York architectural firm of Ely Jacques Kahn and Robert Allan Jacobs. Unlike the waste spaces that characterize the roof-tops of most of today's buildings, this project utilizes the roof for more than mere protection. In effect, it transfers to the top of the structure the surface of the plot on which it stands, supplementing the usefulness of the building and adding substantial value to the property.

Areas dedicated to a variety of sports and open air activities are not only skilfully separated from one another, but are distributed on several levels. This arrangement makes possible a desirable privacy for all who use the roof as well as a minimum of interference among the various activities of the participating groups.

Many of the revolutionary building improvements now in the planning stage will be developed after the war is won, with the aid of Barrett Specification Roofs. These famous coal-tar pitch and felt roofs provide the maximum in dependable, waterproofing and weather-proofing protection.

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Barrett Specification Roofs*

The design shown here is the eighth in the Barrett series of functional roof projects prepared by outstanding American architects. You are invited to write for reprints of the complete series for your file.

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Modern Gymnasium Design

FOLDING BLEACHERS
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48 page book
POSTWAR PLANNING for SCHOOLS
Dept. 110

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--against the danger of scalding water
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WARM WATER
HOT WATER
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POWERS WATER TEMPERATURE CONTROL

POSTWAR PAINT

(*Continued from page 70*)

Q: *I have had trouble with paint over lacquered metal.*

A: That's because nitro cellulose lacquers have very hard surfaces. If you put an alkyd over a lacquer you usually treat with a solvent first.

A: You should sand the cabinets or treat lightly with alcohol.

Q: *Do light colors peel off of dark colors?*

A: I see no reason why this should happen. It's rare. Of course the darker they are, the softer they are.

Q: *On exterior painting—I assisted on specifications for some government housing so we wanted a broad specification. We found that painters seldom read, so we wound up by getting three coats of lead and oil. We found that the painters mixed their own and didn't use prepared paint. The painters were polite, but we couldn't jar them. White lead and oil literature makes many claims—so does the prepared paint literature. What are architects to think? Can the architect use either school and get a good job?*

A: Yes, there are two schools. The architect must make his own decision. Excellent jobs are had both ways. The reliability of the painter is a factor, of course. He might be able to tailor his paint to suit the job. The property owner depends generally on the painter. The architect has more responsibility.

A: I claim that white lead alone and linseed oil can't do every job alone, although the painter knows them well. Mixed pigment paint is far more uniform and scientific. There is a catch. You can't get all of the virtues and none of the faults into any one formulation. You need two kinds of paint: one, a true undercoat containing no zinc oxide; two, a true suncoat containing zinc oxide as a cleansing agent. Titanium dioxide also had important functions. Single pigment paints cannot do the whole job. Naturally, the painter can't know how to apportion his ingredients as well as a company with hundreds of chemists for he hasn't the background or facilities.

A: This is not a rebuttal, but the painters have had real and long practical experience with white lead paints. They do a very satisfactory and reliable job. Although I agree that mixed pigment paints are fine, you can do an excellent job with white lead.

Paint and Cement on Stucco

Q: *Is there a sun and weather resistant blue paint for cement?*

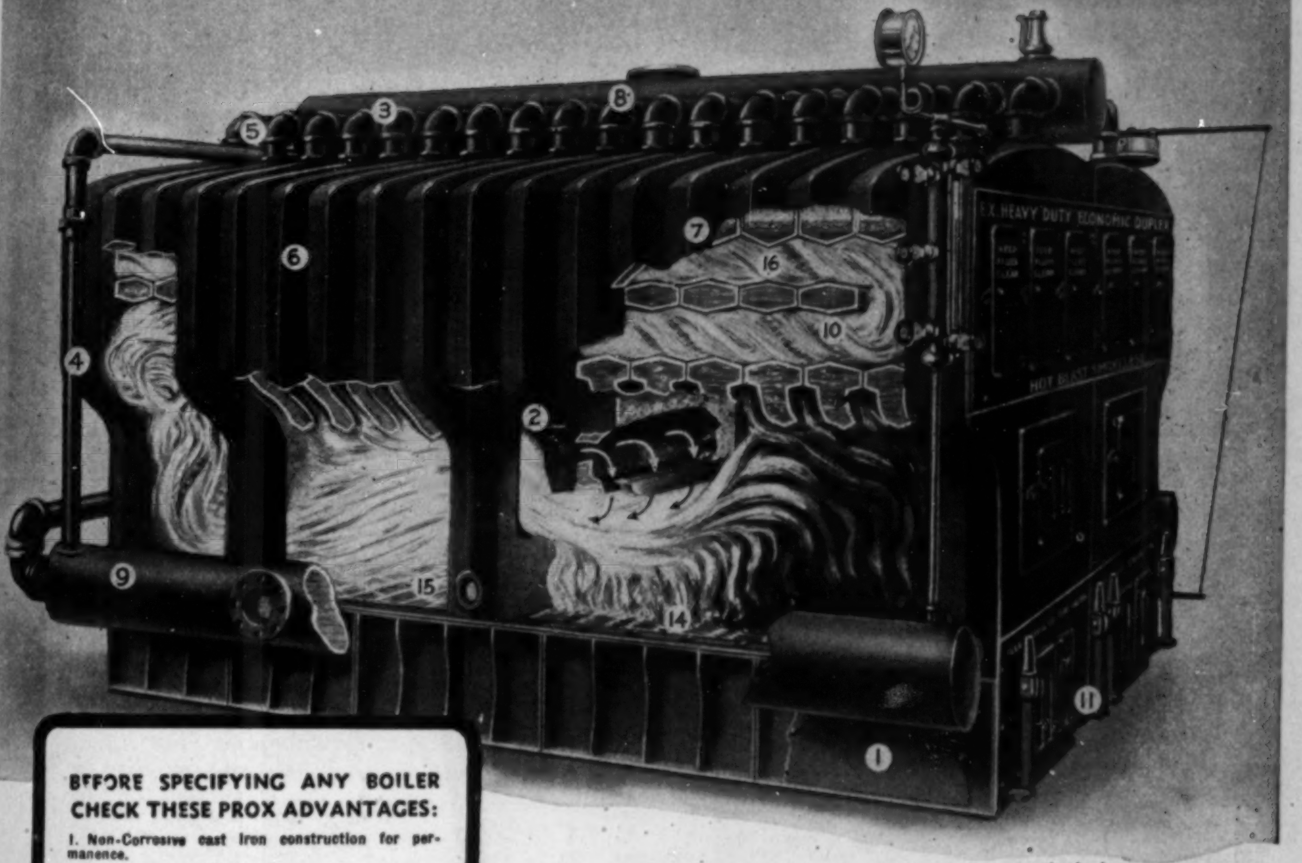
A: Yes, but at present it isn't available. It is light fast and alkali-resistant. You can't use too light pastel shades though. Pastel blues are tough. We don't recommend ultra-marine. Some other blues do a lot better. Cream will hold well. Grays are all right. Blue and green are difficult, but they can be made after the war.

A: Many difficulties in cement painting stem from painting too soon. The CO_2 in the air can neutralize the lime alkali in time, and then many paints can be used successfully. But you have to look out for colors easily affected by alkali. Wait six months if possible. Acid treatment of a large building or surface is difficult. Ask the owner to let it wait. The same is true of stucco. Oil (white lead) on stucco is also good. On brick work. let the mortar

(*Continued on page 136*)

1875 **PROX BOILERS** 1944

for 70 years the standard of Boiler Comparison



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2. Hot Blast Smokeless air intake supplies auxiliary oxygen for complete combustion . . . utilizes full heat value of fuel.
3. Positive Steam Separating Header assures dry steam.
4. Returns or bleeders carry back to boiler any water escaping with the steam.
5. Independent accessible connections guarantee continuous service by permitting any section to be plugged off while firing is continued.
6. Each section can be slipped out and replaced without disturbing other parts of the boiler
7. Large water capacity prevents sections breaking through unsteady water line.
8. Single direct flow connection eliminates cost of header construction and saves head room.
9. Side Headers provide equalized circulation through boiler.
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11. Four independent grate area controls make partial firing possible in mild weather.
12. Cast iron construction and independent connections assure safety by permitting expansion and contraction of all boiler parts.
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Prox Boilers cost no more than others which do not have the many distinctive Prox advantages. They are available in capacities from 400 to 25,000 square feet. Eight different series provide a range of selection to suit any condition. Check the list of features and assure your clients of guaranteed boiler performance by specifying Prox.

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